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ABSTRACT

This study traced "EASTNET: Distance Learning for SUNY in Eastern New York," a collaborative distance education initiative involving three units of the State University of New York from conception through proposal to implementation. The case study traces how such innovations are introduced and how the means of introduction affect the success of implementation and the potential for sustainability. Nine research questions framed the study, focusing on the decision to implement EASTNET and the communication involved in its implementation. Data sources included related printed materials and interviews with key informants from the State University of New York System Administration, the University at Albany, and the College at Oswego. Decision makers, proposal authors, and faculty were contacted and asked to participate in the study. Data were analyzed to see if patterns emerged that indicated similarities or dissimilarities in the responses between administrators and faculty or between institutions. Findings suggest that distance education may be the most rapidly growing form of postsecondary education. A culture change may be required as higher education reaches out to students at different times and places, and changes in how teachers teach and how students learn may be required as interactions between teacher and students and among students may be redefined. Colleges and universities cannot deny the existence and potential of distance education and the expanding educational market. Appendixes contain interview questions and a letter to key informants. (Contains 89 references.) (SLD)

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ED 452 792

Administrator and Faculty Responses to Distance Education: the EASTNET Initiative

by

Kathleen McGrath Kraus

A Dissertation

Submitted to the University at Albany, State University of New York

in Partial Fulfillment of

the Requirements for the Degree of

Doctor of Education

K KRAUS

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August, 1998

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Kathleen McGrath Kraus

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ABSTRACT

Administrator & Faculty Responses to Distance Education: The EASTNET Initiative

Dissertation Chair: Dr. Douglas Windham

This study traced **"*EASTNET: Distance Learning for SUNY in Eastern New York*"**, a collaborative distance education initiative involving three units of the State University of New York, from conception, through proposal to implementation. The case study traces how such innovations are introduced and how the means of introduction affect the success of implementation and the potential for sustainability.

Nine research questions framed the study, including the following: What is the background and who was involved in the decision to use *EASTNET*?, To what extent and in what manner were the faculty consulted and communicated with?, Did the administrators and faculty have experience in this or in other forms of distance education? What training was conducted?, How do faculty vary in perceiving electronic distance education in terms of their own philosophy of education?, To what extent did technology issues evolve?, Are there differences in organizational culture between institutions?, Are there barriers to the sustainability of *EASTNET?*

The literature on distance education was reviewed, as was the literature on the diffusion of innovation. Data sources included related printed materials and interviews with key informants from SUNY System Administration, the University at Albany and the College at Oswego. Decision makers, proposal authors and faculty were contacted and asked to participate in the study. Questions, appropriate to the categories of

informants, were asked, but primarily the unstructured interview process was followed. Data collected were analyzed to see if patterns emerged that indicate similarities or dis-similarities in the responses between administrators and faculty or between institutions.

Conclusions indicate that distance education may be the most rapidly growing form of postsecondary education. A culture change may be required as higher education reaches out to students at different times and places. Changes in how teachers teach and how students learn may be also be required. Interaction between teacher and students and among students may also be redefined. Colleges and universities cannot deny the existence and potential of distance education as the marketplace is expanding and shifting. Existing campus-based models will not be able to meet the needs of this expanding market. While not a replacement for traditional higher education, distance education is one of the opportunities that can help higher education meet the needs of state, national and international constituencies.

DEDICATION

I, with great pride and gratitude, dedicate this dissertation to:

my husband, P. Martin Kraus

my son, Philipp M. Kraus

my daughter, Frances Bonner Kraus

My husband, my life-long love and partner since the age of fifteen, has been with me and encouraged me throughout my life and through all of my educational pursuits. If it were not for him, I would never have entered the doctoral program. His support and love have made every one of my accomplishments possible.

My children have endured a mother who has been a student for virtually their entire lives. This required much independence and love on their parts. For this, I will be forever grateful and will do everything in my power to support them in similar quests and other endeavors which they value.

This dissertation is also proudly and lovingly dedicated to:

my grandmother, Frances Bonner McGrath

It was she who instilled in me, at a very early age, the love and respect for life-long learning which has changed my life. Her influence not only encouraged my personal growth, but also impacted my career choice in Adult and Continuing Education. Her words stressing openness to learning each and every day will never be forgotten.

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When a person is completing a life long goal she becomes very reflective on the events leading to the accomplishment. It is appropriate that I use this document to acknowledge the help and guidance that I have received along the way to the completion of the doctoral degree. In particular, my appreciation goes out to all of my key informants. Without their enthusiastic participation and candor, this dissertation would not exist. The Continuing Education Association of New York (CEANY) is also recognized and appreciated for the two research grants that were awarded to me in support of this research. I was honored to receive them.

The first faculty member who impacted not only my tenure in the doctoral program, but also my tenure at SUNY New Paltz, was Dr. M. I. Berger. His course on the ethics in education was the very first course in which I enrolled at the University and it opened my mind to new ways of evaluating circumstances. The wisdom that I gained from his philosophical discussions will stay with me throughout my career.

Dr. David Wiles, my advisor, was always available for a conversation or to offer some sound advice. His requirement to keep a journal throughout the time spent in the Professional Administrator Option (PAO) was instrumental in my professional growth that year. I thank him for his insight and for enabling me to work through some difficult issues through the journal.

Also during the PAO, Dr. Gordon Purrington allowed me the freedom to investigate the Adult and Continuing Education literature to fulfill course requirements. The knowledge gained through this research empowered me to become a better advocate for adult students on my campus and also, to receive a promotion to director of continuing and professional education.

Dr. Frances Kemmerer has always been most generous with her time and talents. I cannot thank her enough for the guidance that she gave me in the conceptualization of my dissertation proposal. Her support throughout the dissertation phase was invaluable.

Dr. W. Paul Vogt was instrumental in my ability to complete the doctoral degree. As our seminar leader in the PAO, he facilitated my journey into the world of educational research ("the quals. vs. the quants.") and helped our entire cohort get through a very difficult residency year. For me, he was influential in focusing my dissertation topic to something that was not only extremely interesting and valuable, but actually doable.

Then there is Dr. Douglas Windham, the chair of my committee. He will forever have my gratitude for the patience and kindness that he always displayed as I struggled to remain objective about my subject. He was always available, and his wisdom and his wit were indispensable to me as I traversed the journey into distance education research.

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Many others must be acknowledged for their support. My siblings allowed me to be a family "drop out" and still retain their love and encouragement. Judy Costa and the entire staff of Continuing & Professional Education at SUNY New Paltz have showered me with kindness during my six years of study. Most noticeable in her support is Gail Parisi, my Associate Director and friend, who "steered the C&PE ship" while I was in seclusion writing this dissertation.

Every writer must have an editor. Those of us who really cannot afford to hire one must depend upon someone who is knowledgeable and respected, and who is willing to give unselfishly of her time to assist an old friend. I was fortunate to have just that kind of friend in Karen Holliday who spent hours reading and re-reading my drafts. I could not have completed this dissertation without her help, love, friendship and support.

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CHAPTER I: INTRODUCTION

Distance education may be the most rapidly growing form of postsecondary education around the globe. "This paradigm shift is a fundamental change. Gehlauf, Shatz and Frye (1991) state that technologically delivered distance education courses are one of the most significant changes to occur recently in higher education. We are in an era parallel to the massive revolution in desk-top computing in the 1980s" (Siantz et al., 1995, p. 5). As advances in technology increase and various modes of distance education become available, institutions of higher education are obliged to study the potential of distance education to determine its applicability to, and compatibility with, their missions.

In an era characterized by fiscal constraint, public agencies are challenged to increase their efficiency. Producing the same quality of services at a lower cost may require the adoption of new approaches to service delivery. The State University of New York has traditionally voiced commitment to both access and excellence. The former Chancellor of the State University of New York, speaking to the New York State Assembly Standing Committee on Higher Education, put it this way:

> "We have worked hard to continue our commitment across initiatives....This effort will go forward although...since 1988, SUNY's core operating budget has decreased from 84 percent state tax dollar support to 49 percent state tax dollar support" .... "This year, you and your colleagues passed legislation requiring us to develop a multi-year, comprehensive, system-wide plan to increase cost-efficiency in the continuing pursuit of the highest quality and broadest possible access consistent with our mission..." and "The board has particularly mandated to consider making recommendations in several key areas, including the

> use of technology for academic and administrative purposes, learning productivity, and the strengthening of academic specialization" (Bartlett, 1995, pp. 3-5).

One effort to help achieve this cost-effectiveness while maintaining access, is the use of technology through the Educational Technology Initiative (ETI). ETI is administered through the Office of Educational Technology at SUNY System Administration and its primary goal is to modernize the State University through the use of the most current educational technology.

In response to a "request for proposal" from SUNY System Administration in August, 1995, the University Centers at Albany and Binghamton and the College at Oswego proposed "*EASTNET: Distance Learning for SUNY in Eastern New York,*" and were awarded a grant in the amount of $874,424 to establish a distance education network for SUNY in eastern New York State. Several other similar initiatives also were funded such as *WESTNET*, for distance education in western New York State and The SUNY Learning Network, a collaborative asynchronous learning network initially supported by eight SUNY campuses. If these ventures are successful, it is possible that similar projects will be introduced at other campuses and in other regions of the state. It is hoped that *EASTNET* will increase access and spread increasingly scarce resources across greater numbers of students. This concern over the most effective use of scarce resources is cited in *"Distance Learning: The Presidents' Task Force Report"* which was completed in January, 1995.

> "Distance Learning, in its many forms, both on and off the campus, can enhance the capacity of the faculties of the State University of New York

> to reach out and to interact with students at flexible times and places as never before. Distance learning can provide new options for existing students and attract new students, including many who require professional re-education in the workplace. Through applications of distance learning, SUNY can respond more fully to state needs and increase the services of public higher education. The Task Force strongly recommends that campuses, building on their established missions and high quality educational programs, move vigorously to develop and offer distance learning opportunities to students throughout the State and beyond." (p. 1).

This report suggests that the sharing of academic resources across campuses is critical to the future success of SUNY. "Campuses should collaborate in offering distance learning opportunities, including sharing of faculty, team taught courses, and jointly registered programs. SUNY as a system should play a proactive role in encouraging such collaboration." (p. 11). The ETI grant funds are considered an initial investment in the technological infrastructure of state higher education institutions.

Three units of the State University of New York (SUNY)--the University at Albany, Binghamton University, and the College at Oswego--have established a distance learning network for SUNY in eastern New York State. The projects of the network include undergraduate education in Slavic languages and doctoral level course work in educational administration, and master's level course work in social work and human development. This study focuses on the offering of the Doctoral Program in Educational Administration and Policy Studies by the University at Albany and the College at Oswego. It traces the introduction and initial implementation through May, 1998.

The distance education infrastructure of *EASTNET* uses full motion video interactive classrooms. Internet and library enhancement make several distance learning

program initiatives possible and may be expanded in the future. According to the *EASTNET* project proposal, SUNY is investing in this project with one goal to bolster the enrollments for each campus and overall for SUNY, and another, to facilitate the sharing of increasingly limited teaching expertise across campuses (Genshaft, 1995). *EASTNET* was designed to help meet the educational needs of the eastern part of New York State more effectively, as the system increases access to potential students who would not be able to enroll in undergraduate courses in the Slavic languages, doctoral level courses in educational administration, and master's level programs in social work and human development.

The purpose of this study is to trace the history of *EASTNET* from conception, through proposal to implementation, in order to contribute to the understanding of distance education and to the knowledge of how to implement distance education programs successfully at institutions of higher education. The study traces how such innovations are introduced and how the means of introduction affect the success of implementation and the potential for long range success and sustainability. It also discusses effective methods of collaboration between postsecondary institutions.

Research Questions

1. What is the background of the decision to use *EASTNET*? Who was involved in the decision-making process? What stakeholders were involved in the decision process? What was the time-line followed from the development of the concept of *EASTNET*?

2. To what extent and in what manner were the faculty (the potential implementors) consulted in the formulation of the *EASTNET* proposal? What types of communication mechanisms were utilized to keep all important constituencies informed?

3. Did the administrators and faculty have experience in this or in other forms of distance education? If so, what types of experience? What training was conducted for administrators and faculty?

4. How do faculty implementors vary in perceiving electronic distance education in terms of their own philosophy of education and their own preferred styles of teaching and interacting with students? How likely are they to become involved and to stay involved?

5. What are the differences between faculty and administrators in their views of the benefits and costs of distance education?

6. To what extent did technology issues evolve during and after the introduction of *EASTNET*?

7. Are there differences in organizational culture between the participating institutions? If so, have they affected the implementation of *EASTNET*? In what ways?

8. Are there barriers to the sustainability and continued enhancement of *EASTNET*? If so, what are these barriers? How might they be overcome?

9. What lessons has the implementation of *EASTNET* presented to decision makers about planning and evaluation?

This case study focuses on the involvement of administrators and faculty in the introduction of this technology. Distance education may require a culture change in the participating institutions and the most important determinants of whether the change occurs are the responses of administrators and the faculty. "Organizational transformations can occur in response to or in anticipation of major changes in the organization's environment or technology." "...(this) may require modifying corporate culture as well as internal structures and processes..." "It involves qualitatively different ways of perceiving, thinking and behaving in organizations" (Cummings & Worley, 1993, p. 520).

The environment in 1998 requires institutions of higher education to reach out to students at flexible places and times. Distance education enables this outreach, but changes the ways in which professors teach and students learn. It redefines the classroom, requires experimentation with technology, and redefines interaction.

Distance education also requires an investment in training to develop educators' proficiency in technology, networks and multimedia pedagogies. In some ways pedagogy in higher education can be considered a low technology culture.

> "Conventional provision is the normal offering of education in schools, colleges and universities today. Its characteristic structures are the dialogue, the lecture developed by the medieval universities, the tutorial and seminar added by the humanists and, more recently, the laboratory practical, the field trip and the periods of study in the library or resource center. Its characteristic technologies today are the overhead projector and the white (or black) board, technologies which require the students to travel to the institution for the purposes of learning...With the developments of technology of the Industrial Revolution this conventional face-to-face interpersonal provision continues, grows more widespread with the growing involvement of almost the whole population in sequential schooling for a substantial number of years (Vertecchi, 1993) and is itself enhanced by technology" (Keegan, 1995, p. 9).

Distance education demands moving to a high technology culture and changes the nature of communication and interaction between teacher and student. "The German scholar, Peters (1993) had argued that there was something unsettling about a form of education (distance education) in which interpersonal communication and face-to-face interaction in the learning group were eliminated, as these were regarded as cultural imperatives for education in East and West. Now these characteristics can be electronically recreated" (Keegan, 1995, p. 10). "Recreated" may not be totally accurate as technologically produced interaction may not be of the same quality as in person interaction. However, the compressed video codec technology (*PictureTel)* utilized by *EASTNET* does make it possible for students and teacher to interact face-to-face from a distance.

Distance education also requires changes in the values and behaviors of administrators and faculty. "The role of the distance teacher has expanded and those who teach at a distance must wear many hats: that of facilitator, supporter, communicator, instructional designer, media expert, and coordinator. Effectively filling this expanded

role can be accomplished only by working as a team member in the distance education arena" (Gunawardena, 1992, p. 66).

It is hoped that this case study will add to the understanding of how administrators and faculty react and adjust to distance education. The study followed administrators and faculty at the two collaborating institutions from the introduction of *EASTNET* through the second implementation year to identify their initial responses to distance education and identify any personal and professional adaptations to the use of technology in instruction.

Knowledge of these patterns of adaptation may facilitate the involvement of administrators and faculty at the collaborating institutions. This knowledge may also be helpful to administrators and faculty at other institutions of higher education as they endeavor to introduce and implement distance education projects. This information is important because it may facilitate the introduction of additional distance education initiatives, as many believe that there will be increasing interest in distance education in the future.

Interviews were conducted with twenty key informants at the collaborating institutions and at the State University of New York System Administration. The data collected were analyzed to see if patterns emerged that indicated similarities or dissimilarities in the responses between administrators and faculty or between institutions.

Design of the Study

This study is a case study of *EASTNET* and focuses on the implementation year included in the grant award, academic year 1996-97 and continues through May, 1998. Data sources included interviews with key informants from SUNY System Administration, the University at Albany and the College at Oswego. Decision makers, proposal authors, faculty implementors and potential faculty implementors were contacted and asked to participate in the study. Lists of questions, appropriate to the categories of informants, were asked, but primarily the unstructured interview process was followed. Prepared questions were used to keep the informant on the subject of the interview and the case study. Interviews were documented by hand written notes and by audio-tape by the primary researcher.

CHAPTER II: BACKGROUND AND CONCEPTUAL FRAMEWORK

Background

Distance education may not be utilized at a sufficiently high level in our society. Courses have been distributed through various distance education modes for over one hundred and fifty years. Research has shown that, when appropriate changes are made to instructional design, and adequate support is provided to teacher and students, distance education is as effective as traditional methods of education. In a study of 3,742 students in 40 televised courses completed by the University of Maine at Augusta, it was found that "academic achievement was well above average and no differences were found between the grades of the students in the live sections and those in the receive/televised sections of the courses" (As cited in Berman et al., 1992, p. 13). Reviews of other similar studies do not show that traditional education produces better outcomes than distance education (Berman et al., p. 12). Berman's findings are supported by research at Indiana University (Pugh and Siantz, 1995; Pugh et al., 1994; Pugh et al., 1993). "Learning and attitudes of participating students are at a level that it makes no difference whether the course is received in the traditional format or whether it is received in this technological environment" (Siantz et al., 1995, p. 5).

McNeil and Nelson (1991) concluded, after completing Meta analyses of sixty-three research studies concerned with the effectiveness of interactive television, that distance education is an effective means of instruction (As cited in Siantz, et al., 1995, p. 6). Kendall and Oaks (1992) also discuss studies comparing distance education and traditional classrooms at the postsecondary level. They concur that distance education is

effective. "...such studies have shown that students taking courses via distance education technologies achieve as well as students taking courses via traditional methods" (Kendall and Oaks, p. 3).

In fact, studies have been done comparing outcomes of student learning in distance education courses versus traditional on campus courses since as early as 1928 (Columbia University). In 1973, Gayle B. Childs (University of Nebraska) completed a meta analysis of thirty-seven research studies that compared various distance education offerings with conventional offerings. "Childs found that all of these studies reported little or no difference in outcomes. When there were slight differences, they tended to favor correspondence study. Childs stated the conclusion that there was 'no significant difference'...in outcomes among the various media. In 1990, a subsequent compilation of studies, he noted that the overall results remained the same" (Pittman, 1995, p. 42).

Awareness and acceptance of the advantages of distance education are not widespread in the higher education sector. However, the changing environment of education may increase the importance of the distance education option. The educational demands of a technological and information society also are increasing. More adults than ever before are enrolling in institutions of higher education. These adults have complex lives that require balancing time and priorities. Distance education can offer solutions to many of these environmental requirements.

The concept of distance education is complex, but generally most educators agree that distance education is broadly defined to include all methods of teaching students physically remote from the educational institution. (Verduin and Clark, 1991; Garrison

and Shale, 1987). Advances in hard technology have created new interest in distance education in the past twenty years. Today there are more numerous and varied ways to distribute educational programs than in any previous time. Distance education can be offered at remote locations at the same time as at the host institution by audio, video, or two-way audio/video. Using different technologies, distance education can also be offered asynchronously via computer modem twenty-four hours a day from any location that has access to a computer and a modem. Technology has opened new avenues to education that did not exist previously.

Distance education has been offered in various forms and modes, throughout the world, for at least the past 150 years. The first date that distance education was utilized is disputed. While the date of the first distance education initiative is not known, the first publication in the United States to mention a program offered through distance education was the Boston *Gazette* which advertised shorthand courses by mail on March 20, 1728 (Verduin and Clark, 1991). Today more than 10,000,000 people, 4,000,000 in the United States, participate in some form of distance education annually in every region of the world (Verduin and Clark, 1991). As people become more technologically sophisticated, and become more comfortable with learning from a distance, there appears to be a potential for postsecondary institutions to meet the educational needs of the increasing number of technologically-oriented people using forms of distance education.

The end of the Twentieth Century has brought with it an explosion in knowledge and technology. Many experts see this explosion as only the beginning and agree that to be successful in the next millennium, people must participate in lifelong learning.

constantly updating their professional skills (Stern, 1992). "Just as the education of children was the perpetuating force of the industrial society, the education of adults will be the stimulus of the new information society" (Dillon, 1989, p. 35). The acquisition of updated knowledge is no longer a luxury. It is a necessity. Although not all of this learning must take place through schools, it is clearly a potential market for postsecondary institutions.

Adults, mostly studying part-time, have recently become the majority of enrolled students in higher education in the United States (Stern, 1992). Adding this fact to the rapid expansion of knowledge and information suggests that there is a large market for higher education, possibly one usefully served through distance education.

It seems reasonable, given its traditional role in the preparation of professionals, that the university should take the leadership role in distance education. As with any organizations, only those institutions that can successfully adapt to environmental changes will survive and prosper. Universities have missed opportunities to deliver educational services in new and innovative ways in the past because they have not been willing to change.

In order for any innovation to be successfully implemented, "key players" must "buy in". The key players in higher education are the faculty and administrators. The use of the various modes of distance education requires the acceptance of both sets of actors. "Although the implementation of technologies is growing, the rate of adoption is still quite slow (McNeil, 1990; Gunawardena, 1990; Heinich, 1984)" (Dillon & Walsh, 1992, p. 5). According studies by Stinehart (1988), Gunawardena (1990), and McNeil (1990),

one of the major barriers to the expansion of distance education technology at the postsecondary level is the faculty (As cited in Dillon & Walsh, 1992). Acceptance of distance education technologies is growing among the faculty, however one of the barriers to a higher acceptance rate is that the use of instructional telecommunications requires changes in teaching practices and the giving up of a degree of control over the teaching-learning process (Dillon, 1989).

Acceptance by administrators is also critical to the success of distance education. In the same study Dillon found that while administrators voice their support of distance education, they are often suspicious of it and unwilling to reward it meaningfully. Lindquist (1978) has identified the critical nature of the reward system to the successful acceptance of any innovation in higher education. Dillon also suggests that distance education will remain outside of the mainstream unless it is "absorbed into the institutional reward system" (1989, p. 41). This indicates that participation in distance education must be recognized as important in the promotion and tenure process at institutions of higher education. Some faculty will be drawn to distance education for various reasons, but "this participation will be limited and certainly not of the scope required to meet the demands of a society in which the quality of life and access to education are directly related" (Dillon, p. 42).

Another area that is critical to the success of distance education is that of faculty development. Research has shown that faculty training is most effective when it deals with the instructor's role of mentor, effective communication with students, and methods for increasing the influence of local faculty in distance education instruction (Dillon,

1989). Perhaps the must neglected area, and yet one crucial to the success of distance education, is the commitment of institutional leadership. In the implementation of many distance education initiatives this is not always the case. "Institutional approaches to distance education can be characterized as piecemeal, half-hearted attempts at extending educational resources to new populations of learners" (Dillon & Walsh, 1992, pp. 17-18).

"As McNeil (1990) states, the 'attitudinal issues--how people perceive and react to these technologies--are far more important now than structural and technical obstacles in influencing the use of technology in higher education'" (As cited in Dillon & Walsh, 1992, p. 5). Although it appears that the successful use of technology in higher education is predicated on the acceptance by all stakeholders, faculty and administrators have been somewhat ignored in the distance education literature (Beudoin, 1990, as cited in Dillon & Walsh, 1992, p. 5).

In their review of the literature, Dillon & Walsh discovered that most distance education research focuses on the learner: learner outcomes, learner attitudes and learner characteristics. They found only 24 articles out of 225 that focused on faculty. While most of these 24 articles did focus on faculty attitude and a few focused on administrator attitudes, they make up only a very small portion of the growing literature on distance education. This possible deficiency in distance education research is one of the reasons why a case study such as this study of the implementation of *EASTNET* is important. It is hoped that as distance education courses are introduced through the collaborating institutions and the case study is completed, that the knowledge gained of

faculty and administrator attitudes and behaviors in this case study will facilitate future initiatives or inform future research projects.

Conceptual Framework

Universities and colleges are conservative institutions. Change does not usually occur spontaneously and it is often viewed with suspicion. For example, innovative offerings are frequently left to the continuing education or extension units, which usually operate at the margin of the university. In the instance of professional continuing education, for example, organizations not connected to postsecondary educational institutions have come forward to meet the needs of professionals when these needs have not been met by colleges and universities. In the accounting profession, for example, 80% of all continuing professional education is provided by the [American Institute of Certified Public Accountants] AICPA (Stern, 1992). Professional associations, other proprietary organizations, and businesses and industries have stepped forward to take advantage of this "educational market windfall" (people needing continuing professional education). "...when social institutions lack energy to adapt to change, the people who feel that the changes are necessary bypass existing forms and create other institutions" (Stern, 1992, p. 14). Community colleges in the United States and the polytechnics and the Open University in the United Kingdom are examples of new institutions being created to provide services that postsecondary educational institutions were unable or unwilling to supply.

Distance education is not new. However, it may appear "new" (and somewhat threatening) to administrators and faculty at postsecondary institutions who have little

experience with this approach to the delivery of services. The framework of this case study was based on the theories of diffusion or dissemination of innovation. The work of Everett M. Rogers was relied upon heavily as he is one of the foremost authorities in the field. His research began prior to 1962 and he is credited with much of the development of the theory of the diffusion of innovation. He stresses that diffusion of innovation must be viewed within the broader context of the social system. Rogers suggests that the larger process begins with the identification of a perceived problem or need and includes the actions of the change agency to solve the problem through the diffusion of an innovation. Research that he published in 1983, also stresses that innovation process in organizations is different from that of individuals. It is readily apparent that this study should be based on the framework that he developed.

Innovations can be tried but change will not occur if these new ideas are not communicated to, and adopted by, potential users. **Communication** is the process by which participants create and share information with one another to reach a mutual understanding. According to Rogers (1983), every innovation entails an amount of uncertainty or lack of predictability and information. The sharing of information can reduce uncertainty. This information is referred to as *innovation-evaluation information* and it usually leads to a reduction in uncertainty about an innovation's expected consequences.

Rogers defined *technology* as "...a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome" (Rogers, 1983 p. 35). He stresses that most technologies are comprised of a hardware

component which consists of the material or physical object, and a software component, which consists of the knowledge base for the physical object. Information is needed about both components of an innovation.

Rogers defines **diffusion** as the process by which an innovation is communicated through certain channels over time among members of a social system. The most important elements of diffusion are the **innovation** itself, the **communication channels** used, the amount of **time** for the innovation to be adopted or rejected, and the **members of the social system** considering adoption of the innovation. Rogers also suggests that diffusion is a kind of social change. Alteration occurs in the structure and function of a social system during the process of diffusion as innovations are adopted or rejected, thus leading to certain consequences.

In recent years it has been recognized that diffusion can occur through a decentralized process as well as through the traditional centralized process. A decentralized process uses horizontal networks and the potential adopters are the main mechanism spreading the innovation. In the decentralized model, frequently potential adopters are solely responsible for the self-management of the diffusion of innovation and new ideas are born from the practical experience of certain individuals in the system.

There are five stages in the innovation-decision process. The **knowledge stage** is the period in which individuals are exposed to the existence of an innovation and gain some understanding of it. The **persuasion stage** follows in which individuals form favorable or unfavorable attitudes towards the innovation. Next is the **decision stage** during which individuals engage in activities to adopt or reject the innovation. If

adopted, the fourth stage is the **implementation stage** in which the innovation is put to use. Lastly, the **confirmation stage** occurs, during which adopters decide whether to continue of discontinue the use of the innovation (Rogers, 1983).

Although all innovations must go through each of these stages, there are different rates of adoption for different innovations. Rogers defines the rate of adoption as the rate of speed with which an innovation is adopted by members of a social system. The rate of adoption is affected by the main elements of diffusion including the attributes of the innovation and the nature of the social system, the type of innovation decision, and by the extent of change agent efforts in the diffusion process.

The **attributes of the innovation** itself affect the time needed for adoption. There are many attributes which affect adoption, but those that have the most affect are the following: *relative advantage*, defined as the degree to which the innovation is perceived as better than previous ideas; *compatibility*, the degree to which the innovation is consistent with values, past experiences and needs of potential adopters; *complexity*, the degree to which the innovation is perceived to be difficult to understand or use; *trialability*, the degree to which an innovation can be experimented with on a trial basis; *observability*, the degree to which results of using the innovation are visible to others (Rogers, 1983).

Generally, innovations that are perceived by potential adopters as having greater relative advantage, compatibility, trialability, observability and less complexity will be adopted more rapidly. Perception is stressed throughout the diffusion literature. "It is the receivers' perceptions of the attributes of innovations, not the attributes as classified by

experts or change agents, that affect their rate of adoption. Like beauty, innovations exist only in the eye of the beholder. And it is the beholder's perceptions that influence the beholder's behavior" (Rogers, 1983, p. 212).

The second variable affecting the rate of adoption of an innovation is the **type of innovation-decision**. The main types of innovation-decisions include: optional, made by an individual independent of the decision of others; collective, made on a consensual basis; and authority, made by a few who possess power, technical expertise or status. It is recognized that the individual-optional innovation decision will be more rapidly adopted than a decision which involves more people. An authority decision, such as one in which the city mayor or supervisor makes a decision rather than deciding by public referendum, is usually made more quickly. Authority decisions, although the fastest, can be circumvented during the implementation stage.

The third element affecting rate of adoption is the **communication channel**, the means of getting messages from one individual to another. The nature of the relationship between individuals discriminates communication channels as either mass media or interpersonal. Mass media channels, utilizing any type of mass medium (radio, newspaper, television, World Wide Web, etc.) are most effective during the knowledge stage. Interpersonal channels, which involve face-to-face communication, are most effective during the persuasion stage. Similarly, cosmopolite channels are more important during the knowledge stage and localite channels are relatively more important during the persuasion stage (Rogers, 1983).

The fourth factor having an effect on rate of adoption of an innovation is the **nature of the social system**. This factor relates to the norms of the social system and the amount of interconnectedness (the degree to which units in a social system are linked by interpersonal networks) within it.

The fifth element affecting the rate of adoption of an innovation is the degree of **change agent promotion efforts**. Change agent promotion efforts refer to the amount of time, energy and commitment that change agents put into persuading potential adopters about a particular innovation. This is not a linear affect, as might be expected, due to the impact of opinion leaders in a social system. The greatest affect of change agent efforts occurs when opinion leaders are adopting an innovation, usually occurring somewhere between 3 and 16 percent of adoption in a system (Rogers, 1983).

In addition to the efforts of change agents, the social system also generates pressures toward adoption as more of its members adopt the innovation. **Diffusion effect** refers to the increasing pressure from interpersonal networks. It is the cumulatively increasing influence upon an individual to adopt or reject an innovation from peer networks. The diffusion actually affects the norms of the social system as the innovation becomes part of the routine of the system.

The **degree of innovativeness** possessed by an individual or other adopting unit in a social system also affects the rate of adoption. Rogers (1983) summarizes the standard set of adopter categories as follows: the *innovators*, characterized as venturesome; the *early adopters*, characterized as respectable; the *early majority*, characterized as deliberate; the *late majority*, characterized as skeptical; and last on the

continuum, the *laggards*, characterized as traditional. "Adopter distributions tend to follow an s-shaped curve over time and to approach normality. One reason is because of the diffusion effect, ...resulting from the activation of peer networks about the innovation in the social system. This influence results from the increasing rate of knowledge and adoption or rejection of the innovation in the system" (Rogers, p. 269).

If the diffusion process relies on the modeling and imitation by potential adopters of their near-peers, it also relies on the flow of information through interpersonal networks, as individuals seek information from those who have already adopted an innovation. **Opinion leadership** is the degree to which an individual is able informally to influence other individuals' attitudes or overt behavior in a desired way with relative frequency" (Rogers, 1983, p. 271). Opinion leaders, because of their influence, can be instrumental in the adoption or rejection of an innovation. A two-step flow model of communication has been advanced in which ideas flow from mass media channels through opinion leaders to their followers. Communication is more effective and rewarding when the sender and receiver are the same or similar. If sender and receiver share common meanings, beliefs, social status, education and language they are considered to be *homophilous*. However, the very nature of homophily can be a barrier to diffusion of innovation because the channels are horizontal. If an opinion leader is slightly *heterophilous*, or different in certain attributes, diffusion can be increased because the followers see the opinion leaders as more competent and seek advice from them. "When interpersonal diffusion networks are heterophilous, followers seek opinion leaders of higher socioeconomic status, with more education, greater mass media

exposure, more cosmopoliteness, greater change agent contact, and more innovativeness" (Rogers, p. 310).

Opinion leaders exemplify the structure of the social system. Opinion leaders also conform to the norms of the social system, relatively more than their followers. Norms affect the innovativeness of the opinion leaders. When the norms of a particular social system support change, opinion leaders are especially innovative. If the norms of the social system do not support change, its opinion leaders will not be particularly innovative. Opinion leadership is related to social learning theory which states that individuals learn from others that they observe and whom they imitate. This modeling of behavior is basic to diffusion networks.

In traditional diffusion systems, **change agents** are utilized to develop a need for change by the clients, to establish an information-exchange, to diagnose problems, to create intent to change in clients, to translate this intent to change into action, to stabilize adoption of innovations and prevent discontinuances and to then end the relationship with the client. Recently, decentralized diffusion systems have been recognized as effective, especially when members of the social system have the ability to make effective decisions about how the diffusion system should be managed. For decentralized diffusion systems to work best, the users should be highly educated and technically competent and the innovation should not be at an extremely high level of technology (Rogers, 1983).

Two advantages of the decentralized diffusion system are that they usually fit the needs and problems of the users more closely and that the users feel a sense of control as they participate in key decisions. Key decisions can be related to what perceived

problems should receive the most priority, which innovations most closely fit these needs, and how these innovations can be best modified to fit the users. If there exists a high degree of user control over key decisions the social system will be closer to the local needs. In a decentralized diffusion system users also are usually motivated to seek innovations to solve local problems.

One of the disadvantages of a decentralized diffusion system is that there often is not the technical expertise necessary to implement a quality program. If a highly technical innovation is being diffused, a centralized diffusion system may be more effective.

Another disadvantage of a decentralized diffusion system is that the users may not be able to see the "big picture of the social system" if they do not have access to adequate and appropriate information.

Rogers (1983) contends that decentralized diffusion systems are most suitable when the innovation involved does not depend on a high level of technology and when there are relatively heterogeneous conditions. If conditions are homogeneous, a centralized diffusion system may be the best. Elements of centralized and decentralized diffusion systems can be combined to fit particular situations.

Although not always readily apparent, organizations are continuously initiating and implementing innovations, usually based on collective and authority innovation-decisions. According to Rogers and Agarwala-Rogers (1976), "an organization is a stable system of individuals who work together to achieve common goals through a hierarchy of ranks and a division of labor" (As cited in Rogers, 1983, p. 348). Stability is one of the

characteristics which enables organizations to be effective. A stable organizational structure is mainly related to predetermined goals, prescribed roles, an authority structure, rules and regulations, and lastly, informal patterns that include practices, norms and social relationships.

There are many barriers, and even resistance to change in organizations, but still innovation occurs. A number of variables that have been identified as positively (+) or negatively (-) affecting organizational innovativeness. If a variable has a positive effect, organizational innovativeness will increase as that factor increases; if it has a negative effect, organizational innovativeness will decrease as that factor increases. According to Rogers (1983) the three areas that have the most impact include individual leader characteristics, such as attitude towards change (+). Secondly, the internal characteristics of organizational structure, including centralization (-), complexity (+), formalization (-), interconnectedness (+), organizational slack (+), and size (+) have a major impact on innovativeness. Lastly, the external environment of the organization, such as the system's degree of openness (+), impact the organization's degree of innovativeness.

Although there have been hundreds of studies on organizational innovativeness, Sapolsky (1967) and Zaltman et al. (1973) found a low correlation of the above variables with innovativeness of organizations. "The basic reason for these disappointing results is that each of the organizational structure variables is related to innovation in one direction during initiation, and in the opposite direction during implementation. Low centralization, high complexity, and low formalization facilitate initiation in the innovation process, but these same structural characteristics make it difficult for an

organization to implement an innovation" (As cited in Rogers, 1983 p. 361). During the past twenty years the process research approach has replaced the organizational innovativeness variables as a more effective means of understanding organizational innovativeness.

Rogers (1983) stresses the importance of the over-time nature of the innovation process in organizations. Rogers has studied this process and identified five stages, separated by the decision to adopt into **initiation** or **implementation stages**. The initiation stage includes all activities relating to information-gathering, conceptualizing, and planning for adoption and leading up to the decision to adopt. The initiation stage is divided into two stages: *agenda -setting* and *matching*. Agenda setting is the phase during which organizational problems, which can create a perceived need for an innovation, are delineated, followed by a scan of the environment for innovations which may have value for the organization. March (1981) discusses innovation in organization and suggested that it, "...often seems to be driven less by problems than by solutions. Answers often precede questions" (As cited in Rogers, 1983, p. 362). Eveland et al. (1977) supports this idea that the awareness of a particular innovation often starts the innovation in organization. Matching is the phase during which problems from the organization's agenda are compared with innovations to see if there is compatibility and if so, then to plan and design the fit between them.

The implementation stage, including all events, actions, and decisions that are involved in putting the innovation into effect, begins after the decision to adopt. The implementation stage is divided into three stages: *redefining restructuring, clarifying,*

and routinizing. Redefining/restructuring envelops the reinvention of the innovation to fit the particular organization and its problem and the subsequent alteration of organizational structures to accommodate the innovation. Clarifying is the phase in which the relationship between the innovation and the organization is defined more clearly as the innovation is put into full implementation and regular use. Routinizing is the phase in which the innovation loses its separate identify and becomes part of the organization's routine activities. "Later stages in the innovation process cannot be undertaken until earlier stages have been settled, either explicitly or implicitly" (Rogers, 1983, p. 362).

At the beginning of this section it was stated that new ideas can lead to innovation, but no change will occur if the innovation is not communicated and used by individuals and organizations. "Consequences are the changes that occur to an individual or to a social system as a result of the adoption or rejection of an innovation. An innovation has little effect until it is distributed to members of a system and put to use by them. Thus, invention and diffusion are but means to an ultimate end: the consequences from adoption of an innovation" (Rogers, 1983, p. 371). There is not a lot of research on the consequences of innovation for three main reasons. Often it is assumed that innovation will lead to only positive results, referred to as the pro-innovation bias. Secondly, survey research methods are the primary means of innovation research and these methods are not very conducive to the study of innovation consequences, especially since those consequences occur over extended periods of time. A third factor is that

consequences are difficult to measure as individuals are not always fully aware of the consequences of the adoption of the innovation in question (Rogers, 1983).

Diffusion scholars have developed a taxonomy of consequences in an effort to better understand them. Rogers (1983) analyzes consequences according to three dimensions: desirable versus undesirable, or the functional versus dysfunctional effects of an innovation to an individual or social system; direct versus indirect, or the immediate responses to an innovation as contrasted with the secondary changes that happen as a result of the direct consequences of an innovation; and anticipated versus unanticipated, or intended changes contrasted with changes that are not intended or not recognized by the members of a social system.

Desirable, direct and anticipated consequences usually occur together as a result of an innovation, whereas, the undesirable, indirect and unanticipated consequences also usually occur simultaneously. Unfortunately, it appears that it is very difficult, if not impossible, to manage the effects of innovation so as to separate the desirable from the undesirable consequences (Rogers, 1983).

Another problem that exists in the diffusion of innovation is that change agents are usually able to anticipate the form and function of an innovation, but not the meaning that the innovation will take on for potential adopters. Form is defined as the physical appearance of an innovation that is directly observable. Function is defined as the contribution that the innovation makes to members of the social system. Meaning is defined as the subjective (sometimes unconscious) perception of the innovation to members of the social system. According to Linton (1936), "Because of its subjective

nature, meaning is much less susceptible to diffusion than either form or [function]....A receiving culture attaches new meanings to the borrowed elements of complexes, and these may have little relation to the meanings which the same elements carried in their original setting" (As cited in Rogers, 1983, p. 390).

The final aspect of diffusion appropriate to this case study is that of **dynamic equilibrium**. This should be the long range goal of every change agent, as dynamic equilibrium exists when change occurs at the rate of change that enables a system to adapt to it. Dynamic equilibrium is contrasted with **stable equilibrium** in which the rate of change in structure or function of a system is almost zero, as in a very traditional or isolated system. **Disequilibrium**, which usually causes social disorganization, is the situation in which change is occurring at a rate that is too rapid for the social system to adapt effectively.

Universities are organizations that are highly decentralized and complex which facilitates their acceptance of innovation. Problems with the implementation of innovations at universities may be due to these same attributes. This study of *EASTNET* was designed to trace its introduction and initial implementation and compare it to Rogers' research on the diffusion of innovations. Innovations present new alternatives and means to solve problems, but they also present uncertainty. This uncertainty often relates to whether an innovation is superior to the traditional means of solving a problem: whether or not it displays relative advantage. The sharing of information can reduce this uncertainty and enable participants to adopt an innovation. In making an adoption decision, participants often look to peers or near-peers for information, usually subjective

evaluations of a particular innovation. The innovation-decision process involves the stages of: knowledge attainment; persuasion; decision; implementation; and confirmation. This study gathered information from the participants in *EASTNET* to see how activities that took place during these stages impacted its introduction and implementation.

During this study, data also was collected from these participants in order to make comparisons to Rogers' model of Innovation Process in Organizations. In the case of *EASTNET*, how did the information-gathering, conceptualizing, and planning for adoption, leading up to the decision to adopt, of the *initiation* stage, move this distance education initiative into the events, actions and decisions to use this instructional technology, of the *implementation* stage?

CHAPTER III: RESEARCH DESIGN

Introduction

A descriptive, exploratory research design was used to consider the research questions in this study. The purpose of this study is to discover what happened during the introduction and during the implementation of distance education at two of the collaborating institutions. Clarity about faculty and administrator concerns regarding distance education may lead to a better understanding of why some implementation efforts succeed and others fail. The discovery of similarities and differences in perceptions is an important part of this understanding. The qualitative approach is best used when reality is subjective and seen differently by participants within a particular study, whereas a quantitative approach is best used when reality is objective and singular (Creswell, 1994). A qualitative study was clearly indicated in this research on *EASTNET*.

The researcher interacted with the subjects of this study, as opposed to being completely independent, and it was assumed that data collected would be value-laden and potentially biased. The language utilized in this research was informal, in a personal voice and considered evolving decisions. Additionally, the process of this research was inductive and the analytical design emerged with different categories identified as the research was conducted. Data collected was context bound and patterns emerged from this data. Accuracy and reliability of the data were evaluated through verification and corroboration, rather than through quantitative validity and reliability measures.

There are a number of methods associated with the qualitative paradigm, mostly influenced by the traditions of the human and social sciences. These include:

ethnographies, grounded theory, case studies and phenomenological studies. The case study approach was chosen as the best method to conduct this research. Case study methods indicate the exploration of a single entity or phenomenon, referred to as "the case". The case is bounded by time and activity such as programs, events, processes, institutions or social groups (Creswell, 1994). In-depth, detailed information is collected over a sustained period of time (Yin, 1989). The case study approach allowed for the in-depth investigation of the processes of introduction and implementation of *EASTNET*. It also allowed a view into the world of the faculty and administrators involved with *EASTNET* and of the way these individuals think about distance education. According to Borg and Gall, "...the most obvious aspects of everyday life in educational settings tend to become invisible because they are habitual. These need to be rediscovered in order to understand the educational setting" (Borg and Gall, 1989, p. 407). These authors also suggest that events that look the same may have different meanings in different settings and that qualitative methods may be the best way to discover local meanings. Fieldwork is the best method to get directly to the people involved in a study in their natural settings in order to gain a deeper understanding of how they view their world.

When considering a research design, the characteristics of the researcher must also be taken into consideration. The reason for this is that the researcher, rather than objective instruments such as questionnaires or machines, is the primary instrument for data collection. A qualitative design, such as a case study, requires an individual who can work within the openness of an ambiguous procedure that may not have fixed regulations and methods. The researcher must be flexible and be able to change with the

process as it emerges. According to Merriam (1988), the researcher must also possess the trait of sensitivity. "The researcher must be sensitive to the context and all the overt and covert agendas, the nonverbal behavior" (Merriam, p. 38). The third most important characteristic that a qualitative researcher must possess is that of being a good communicator. Guba and Lincoln note that, "the extent to which inquirers are able to communicate warmth and empathy often marks them as good or not-so-good data collectors" (As cited in Merriam, 1988, pp. 39-40).

Merriam also refers to work done by Goetz and LeCompte (1984) regarding boundary spanning. These authors define boundary spanning as the participation in different cultures that are involved with and may affect a specific project. "Successful boundary spanning requires familiarity with, or at least the ability to become familiar with, the behaviors, goals, and beliefs of all constituencies that influence a project" (as cited in Merriam, 1988, p. 40). This researcher's experience in a public, comprehensive, postsecondary institution in New York State should give her this familiarity which Merriam and Goetz and LeCompte believe is critical. The researcher must also know herself well enough to be cognizant of her own personal feelings and biases and be alert to how they may affect the research being undertaken. As a career administrator in Adult and Continuing Education, the researcher must be fully aware of her biases towards providing access and services to the "non-traditional" student population. The researcher also began the study with a "pro-distance education" bias and she had to constantly remind herself to remain objective and really listen to what key informants were saying without interpreting their remarks prematurely. The researcher also is sensitive, has

good communication skills, and a high tolerance for ambiguity which, according to Merriam, would give her the potential to be successful using this qualitative design.

Methodology

The ongoing literature search included the Educational Resources Information Center (ERIC), distance education journals and proceedings of professional association meetings concerned with distance education. Search descriptors were chosen to link distance education with administrator/faculty issues at the postsecondary level. Descriptors included: distance education, higher education, postsecondary education, distance learning, faculty, administrators, implementation, innovation, and tele-conferencing among others.

Interviews of key informants were designed to capture information that facilitated answering the research questions of the study. Sample questions, customized to each category of informant (proposal author, decision maker, faculty) were derived from the research questions. This data was analyzed and then categorized according to recurring themes in order to answer the research questions. These evolving themes were then analyzed based on the theories of innovation proposed by Rogers (1983).

Research Questions (Repeated from pages 5-6)

1. What is the background of the decision to use *EASTNET*? Who was involved in the decision-making process? What stakeholders were involved in the decision process? What was the time-line followed from the development of the concept of *EASTNET*?

2. To what extent and in what manner were the faculty (the potential implementors) consulted in the formulation of the *EASTNET* proposal? What types of communication mechanisms were utilized to keep all important constituencies informed?

3. Did the administrators and faculty have experience in this or in other forms of distance education? If so, what types of experience? What training was conducted for administrators and faculty?

4. How do faculty implementors vary in perceiving electronic distance education in terms of their own philosophy of education and their own preferred styles of teaching and interacting with students? How likely are they to become involved and to stay involved?

5. What are the differences between faculty and administrators in their views of the benefits and costs of distance education?

6. To what extent did technology issues evolve during and after the introduction of *EASTNET*?

7. Are there differences in organizational culture between the participating institutions? If so, have they affected the implementation of *EASTNET*? In what ways?

8. Are there barriers to the sustainability and continued enhancement of *EASTNET*? If so, what are these barriers? How might they be overcome?

9. What lessons has the implementation of *EASTNET* presented to decision makers about planning and evaluation?

Sample Selection/Identification of Data Sources

The case study method was chosen in order to promote an in-depth understanding of the group of individuals involved in the introduction and implementation of *EASTNET*. To this end, the population of this study was: administrators and faculty involved in writing the proposal, *"EASTNET: Distance Learning for SUNY in Eastern New York"*; administrators involved in its implementation; administrators at the System Administration of the State University of New York who are associated with *EASTNET*; faculty in the Department of Educational Administration and Policy Studies at the University at Albany and faculty in the Department of Educational Administration at the College at Oswego in relationship to the offering of Albany's Doctoral Program in Educational Administration and Policy Studies through distance education technology to students in Oswego.

The sample was the same as the population. All faculty members actually teaching by means of distance education technology during the first two years of the project along with the department chairpersons, and other faculty members in these two departments, who were not teaching via distance education in the first two years were invited to

participate in the case study. These other faculty were invited to participate because, although they were not teaching in the project during the first year, if it is to be sustainable and full programs are to be offered by way of distance education, the majority of faculty members in these departments will be involved in the future. Collection of data from a number of members of these two academic departments also allowed for a better understanding of the process of the introduction and implementation of *EASTNET*, as the study was not limited to only the faculty members who first volunteered to teach in the distance education project.

Other data sources included materials related to *EASTNET*, such as memos or reports, official publications, and catalogs which outline the majors being offered through distance education technology for the University at Albany and the College at Oswego.

Approval of the Institutional Review Boards of the University at Albany and the State University of New York at New Paltz, the researcher's employer, was received. It was then possible to obtain a listing of members of the above mentioned groups so that they could be contacted and invited to participate in the study.

Instrumentation

The researcher is the primary instrument for data collection in this case study. Because a human being can never be completely objective or neutral, it is important for the researcher to be able to understand and acknowledge her own biases and values, and to be able to share these with the reader, along with her assumptions and expectations. This was done in the introduction to the case study and served as a constant reminder to remain as neutral as possible while collecting and analyzing data.

A number of processes were utilized to reduce the inclusion of researcher bias. A cassette recorder was used in the collection of data during interviews, which ensures the use of participants' actual language. Another process utilized was the maintenance of a field journal to record the researcher's ideas, feelings and perceptions during and after the data collection stage. Primary key informants were contacted for clarification of points. An external panel, the dissertation committee, was included in every stage of the case study. The input of the key informants and the dissertation committee served to further reduce the possibility of researcher bias. It should be mentioned that one member of the dissertation committee was involved in the early stages of the EASTNET project and participated as a proposal author. This involvement was reduced in the implementation stage.

Quantitative studies are concerned with reliability, internal validity and external validity. Qualitative, naturalistic inquiry studies must also take into account the importance of these criteria. Guba and Lincoln have used the terms "...'auditability', 'credibility', and 'fittingness'" (as cited in Rudestam and Newton, 1992, p. 38).

Reliability or auditability determines if a study can be replicated by future researchers. In order to assure the auditability of this study a coding system was used to code the data into categories or themes. This permits other investigators to understand resulting themes and perhaps reach similar conclusions.

Internal validity or credibility refers to the truth value of the case study. A method that was utilized to increase credibility was to establish structural corroboration of the data. This was achieved in a number of ways. By spending an adequate amount of

time with subjects the researcher was able to check for consistency or discover inconsistencies. This is known as "prolonged engagement". The researcher also allowed for exploration of participants' experience in-depth in order to gather sufficient detail, accomplished through persistent observation. The third source of attaining structural corroboration is through triangulation, or checking with multiple sources of data, such as other researchers, field notes, and other records. The research design also allowed for follow-up interviews. This increased credibility as it allowed the researcher to clarify preliminary findings with subjects (Rudestam and Newton, 1992).

External validity considers whether the findings of a study are generalizable to other populations. This case study emphasized the collection of detailed data, or "thick description" (Rudestam and Newton, 1992) to allow for an in-depth understanding of the individuals involved with *EASTNET*. Generalizability to other situations would have to be made cautiously.

Procedures for Data Collection

Data was collected utilizing the interview process. The majority of the interviews were conducted in person. By going directly to the participants and speaking with them in their natural settings, a greater understanding of what happened should be achieved. Babbie (1995) suggests that interviewing is preferred over other survey techniques when the issues being studied are complicated, as is the implementation of distance education. He cites the advantages of interviewing as higher completion rate and fewer incomplete answers. Babbie also notes that questions and topics can be modified as necessary and

observations can be made during the interview process, often resulting in a richer, more in-depth understanding of those being studied.

Prospective participants were assured that their confidentiality would be protected and that their names would not be included in the study. This assurance was included in a letter which identified the researcher as a doctoral student and requested their participation in this study. The letter was followed up with a telephone call during which a mutually convenient time for the initial interview was identified (Appendix B). Pseudonyms were assigned and used throughout this report. In order to differentiate between administrators and faculty, "Dr." was used as the title for administrators and "Professor" was used as the title for faculty members. Differentiation of organizational affiliation was achieved by using a first initial of "A." for Albany staff, "O." for Oswego staff and "S." for System Administration staff.

A protocol of suggested questions was developed as a framework for the interview. This recording form includes areas for the researcher to make notes of observed behaviors or events and allows space for the researcher to indicate her own feelings or ideas that occur during the interview. Spradley (1979) defines the ethnographic interview as a "...series of friendly conversations in which the investigator gradually introduces new ethnographic elements in order to gain the information sought..." (As cited in Borg and Gall, 1989, p. 397). According to Spradley, the researcher must make the explicit purpose of the interview clear to the informant and direct the conversation towards areas that will uncover relevant knowledge. The researcher also must provide ethnographic explanations so that informants will know why

certain questions are being asked, and be encouraged to answer questions in his own vocabulary. The third most important element in ethnographic interviewing, according to Spradley, is the quality of questions being asked. Different types of questions include: descriptive, or those that delve for informants' perceptions of their culture; structural, which aid the researcher in discovering how informants organize their knowledge; and contrast, or those questions which discover how informants distinguish events in their life (as cited in Borg and Gall, p. 398).

Primarily the unstructured interview format was followed to allow for flexibility and for the clarification of specific points or positions. This unstructured interview format also allowed for the inclusion of topics raised by the informant and facilitated the bulk of the talking being done by the informant (Babbie, 1995). Sample questions were developed to ensure that, although an informal, conversational tone was maintained throughout, the interview remained focused and solid information was obtained.

Sample Questions

Questions for Proposal Authors

1. How and when did you become involved in the *EASTNET* proposal process and how did you participate in this process?

2. Who else was involved in writing the proposal and how were they chosen? How were the collaborating institutions involved?

3. How were administrators and faculty involved in the proposal process? How was faculty motivation dealt with in the proposal?

4. What experience do you have in distance education? Discuss the advantages and disadvantages of distance education.

5. Describe your current role in *EASTNET* and state your judgement of its progress to date.

6. What are the current challenges to *EASTNET's* success and survival and how do you think these challenges should be met?

7. How will *EASTNET* be evaluated?

Questions for Decision Makers

1. Discuss the process by which *EASTNET* was designed and implemented.

2. What were the major planning and management concerns (e.g. technology, communication, financing, selection of institutions and students, evaluation) and how were they dealt with?

3. What role did faculty play in the design and implementation process?

4. What is your experience in distance education? Discuss the advantages and disadvantages of distance education.

5. What are the current challenges to *EASTNET's* success and survival and how do you think these challenges should be met?

6. Discuss the collaboration of institutions (e.g. academic programs, student recruitment, faculty).

7. How will *EASTNET* be evaluated?

Questions for Faculty Implementors

1. How did you learn of *EASTNET* and how did you first become involved in its planning or implementation?

2. How, and by whom, were the decisions about participation and instructional activities made?

3. What is your experience in distance education? What training did you receive in distance education pedagogy and this modality?

4. Discuss the advantages and disadvantages of distance education. How effective is distance education compared to other methods of teaching? Discuss pertinent technological issues.

5. Discuss the collaboration of institutions and its impact on the implementation of *EASTNET*.

6. What are the current challenges to *EASTNET's* success and survival and how do you think these challenges should be met?

7. How would you evaluate the adequacy of the planning and implementation process in terms of timing, technological provision, training, and faculty and administrator acceptance of the *EASTNET* project? How would you evaluate *EASTNET*?

In order to ensure that the interviews would be successful at gathering information from many different types of people, the researcher probed further if some answers were incomplete or if further clarification was necessary. Babbie (1995) contends that probes must be completely neutral so that they can be a tool to continue the data collection

process without effecting responses. Questions such as "How is that?", "In what way?", and "Anything else?" were used to probe for additional information. A conversational tone was used throughout the interview process to effect a greater sharing of ideas and perspectives by the participants.

Data Collection Schedule

The first semester that classes were offered through *EASTNET* through distance education technology was Fall, 1996. It was important that data collection started as early in the implementation stage as possible to ensure that informants could give their immediate reactions to distance education while they were still experiencing the feelings that accompany any innovation or change. Initial interviews were conducted during Spring, 1997 when the researcher traveled to Albany and Oswego to meet informants in person. The interviews were audio-taped and the standardized recording forms were used to record empirical observations and researcher interpretations. The recording form allowed for the noting of both anticipated and unanticipated events.

As each interview was completed, the researcher scheduled enough time to review the handwritten notes within twenty-four hours in an effort to reconstruct the highlights of the interaction as accurately as possible. Efforts were made to transcribe the interview audio-tapes within the first few days after each interview so that the researcher had ample time to recontact informants for clarification of any statements that were unclear.

Key informants who were critical to the EASTNET project were contacted a second time for a follow-up interview. Most of the final interviews were similarly

conducted on site and in person from September, 1997 through May, 1998. A number of interviews with administrators and faculty at the College at Oswego were conducted using interactive video-conferencing, the same technology used in the doctoral distance education project. The researcher remained in New Paltz and with the assistance of SUNY New Paltz technical staff, used PictureTel equipment to communicate with the subjects in Oswego. The unstructured interview format was again followed to allow for open-ended discussion and clarification of ideas previously introduced. This second round of interviews addressed topics similar to those included in the first round to allow for comparisons to the initial reactions of administrators and faculty to the introduction of distance education. Questions were also formulated based on the initial interviews and on any new topics that arose through the data collection and during the continued review of the literature. Additional questions that could have been used if more specific information was needed are listed in the appendix (Appendix A).

Tentative conclusions were discussed with informants which should have uncovered any discrepancies in interpretation. These final interviews addressed some of the same topics as the initial and follow-up interviews so that changes in behavior could be identified. Review of the recording forms and transcription of the audio-tapes followed a similar schedule to that of the initial interviews. This schedule of two interviews should add to the credibility or validity of the study as the researcher had the opportunity to discuss and verify conclusions with informants.

Analysis of Data

During the data collection stage files were created as a continuous process. The data were collected using word processing software, but other research software was investigated to see if it would aid in the effective and efficient storage of data. Data were stored in a number of different ways: chronologically, individually and topically.

During the analysis stage, similarities and dissimilarities were searched for. According to Babbie (1995) norms of behavior, universals and differences or variations from the norm will be the most important areas to be studied. The discovery of general patterns was instrumental in the development of theories and the overall understanding throughout the study. A real advantage of case study research is that "...the field researcher...can continually modify the research design as indicated by the observations, the developing theoretical perspective, or changes in what he or she is studying" (Babbie, 1995, p. 297).

Babbie warns that this advantage of field research can be risky, as the researcher can begin to observe only those items that agree with the tentative conclusions that have been drawn. Another risk is that it is very difficult, if not impossible, to ever know exactly how "typical" those informants who are being interviewed truly are. It is believed that the number of informants chosen to be interviewed was adequate to ensure that these respondents are "typical" of college and university administrators and faculty in the collaborating institutions and perhaps of similar institutions.

There are a number of different ways that textual data can be analyzed and many of these are similar in that raw, unstructured data are being reduced and interpreted. This

reduction of data allowed for the emergence of patterns that facilitated the discovery of similarities and dissimilarities. The exact method of data analysis was decided upon during the data collection stage. Lincoln and Guba (1985) suggest that data analysis is more problematic for researchers undertaking field research and that it is likely that the best method of data analysis only becomes clear during the study.

Interviews used in this case study produced voluminous qualitative data. More than twenty five interviews were conducted, resulting in almost 300 pages of single-spaced transcripts. The researcher reduced this data by first categorizing all relevant information appropriate to the nine research questions and deleting all superfluous information. This first "condensation" of information resulted in 125 pages of single spaced quotations. Still being faced with a massive amount of data, the researcher analyzed these quotations to identify any overabundant information and deleted any quotations that were redundant or excessive. The second condensation resulted in approximately 115 pages of double spaced pages of quotations. Seeking to produce a concise report that would maintain readability, the researcher significantly reduced the final analysis chapter by developing themes to answer the research questions and then distinguishing and retaining the most appropriate quotations.

Limitations

It has already been mentioned that the external validity of qualitative, naturalistic studies can be weak. Because the findings of this study are an in-depth discussion of a small number of subjects within a confined setting, their generalizability is severely

limited (Rudestam and Newton, 1992). The personal nature of field research also limits the generalizability of this study. Babbie (1995) indicates that results of this type of study will not necessarily be able to be replicated by another researcher. Babbie also suggests that the very comprehensiveness of this type of case study will limit the generalizability of the conclusions that have been reached. Babbie continues on to suggest that quantitative measures can be combined with the qualitative methods to avoid any possible selective perception or misinterpretation.

Babbie recommends that the researcher make an effort to request help from others, as appropriate, in order to add the dimension of intersubjectivity. This help was solicited from experts in the field of distance education who have implemented distance education projects and by reading similar distance education case studies. The researcher also attended one national and three international conferences on distance education during the time that this research was being conducted.

It is hoped that this case study will be generalizable to other public institutions of higher education that are in the process of forming consortia as an efficient and effective means of implementing collaborative distance education projects.

CHAPTER IV: ANALYSIS

During the data collection stage of this study, different categories were identified from the responses of key informants. As more interviews were conducted, the facts concerning the case were corroborated by many varied respondents. There was a huge volume of data collected and it was decided to organize it and analyze it based on the nine research questions that were developed in the proposal stage of the study. This is documented in the first section of Chapter IV.

It was also determined that the data should be considered in terms of the diffusion of innovation process. EASTNET followed the five stages identified by Rogers and discussion regarding his model occur in the second half of the chapter, following the analysis by research questions.

Analysis by Research Questions

1. What is the background of the decision to use EASTNET? Who was involved in the decision-making process? What stakeholders were involved in the decision process? What was the time-line followed from the development of the concept of EASTNET?

CHRONOLOGY OF EVENTS

1987--1994	Discussions between Albany's Educational Administration & Policy Studies and Oswego's Educational Administration Departments Regarding Collaboration in the Offering of the EAPS Doctorate in central New York State

1994	Meeting in Oswego Attended by: Vice-Presidents, Deans, Faculty University at Albany & College at Oswego
1994-1995	Meeting in Herkimer Attended by Deans, Faculty University at Albany & College at Oswego
1994	Discussions by Oswego Educational Administration Department Re: Programming via Distance Learning
May, 1995	Meeting between Departments in Oswego Attended by Deans, Associate Deans, Faculty and Others
August, 1995	Office of Educational Technology (OET) releases the Request For Proposal to all units of the State University of New York
Fall, 1995	Meeting held --- halfway between Albany and Oswego
October 18, 1995	Albany's School of Education Academic Council asks for revision To Draft Collaborative Doctoral Program
October 26, 1995	Oswego's Dean of the School of Education recommends Collaborative Doctoral Program
November 6, 1995	Albany's Chair of Educational Administration & Policy Studies Confirms the support of the Department of the Collaborative Doctoral Program
November 28, 1995	Albany's Interim Dean of the School of Education proposes Collaborative Doctoral Program to the Vice President for Academic Affairs and the Dean of Graduate Studies
December, 1995	OET Meeting in Albany to discuss resubmission/collaboration Attended by: OET Administrators, Deans and Vice-Presidents University at Albany & College at Oswego Birth of *"EASTNET"* Project
Fall '95/Spring '96	First Year of OET Grant Funding
February 14, 1996	Notice of Award to University at Albany & College at Oswego

March 14, 1996	Albany's Graduate Academic Council notifies School of Education of approval of alternative residency requirement and the Collaborative Doctoral Program
March 15, 1996	Meeting of all EASTNET participants at University at Albany
May 30, 1996	Oswego faxes draft of promotional flier to Albany
May 31, 1996	Albany revises flier and faxes to Oswego
Summer, 1996	Oswego promotes Collaborative Doctoral Program
June 13-14, 1996	Distance Learning training held in Albany and Syracuse
June 18, 1996	EASTNET meeting held using interactive video conferencing regarding Registration and Tuition
August, 1996	OET Grant Funds received by University at Albany
August 5, 1996	Albany e-mails additional revisions of flier to Oswego
August, 1996	PictureTel Equipment delivered and installed in Albany and Oswego first week of classes [within two weeks of finalizing contract with vendors]
August 26-27, 1996	Distance Learning training held in Albany and Syracuse
September, 1996	Additional microphones ordered/received
Fall, 1996	First courses offered to Oswego Cohort via Distance Education
October, 1996	EASTNET Coordinators notified of M[illegible], 1997 Conference on Instructional Technology
October 28, 1996	EASTNET meeting held using interactive video-conferencing
November 6, 1996	OET Project Directors meeting in Liverpool, New York
Spring, 1997	Oswego Cohort takes courses in Oswego, with Oswego Faculty
Summer, 1997	Oswego Cohort studies in Albany in partial fulfillment of the University's Residency Requirement

Fall, 1997	Oswego Cohort takes courses in Oswego via Distance Education
Spring, 1998	Oswego Cohort takes courses in Oswego via Distance Education
Summer, 1998	Oswego Cohort studies in Albany in fulfillment of the University's Residency Requirement, choosing from eight or nine courses

From virtually the first interview that was conducted, it became apparent that EASTNET was not the actual beginning of the collaboration between the University at Albany and the College at Oswego regarding a cooperative doctoral program. Most of the informants brought up past discussions between the departments of Educational Administration & Policy Studies at Albany and Educational Administration at Oswego. These discussions had gone on for at least for two years and one faculty member indicated that they had originally begun almost ten years earlier.

Oswego's Educational Administration faculty had identified a need of residents of central New York State for access to a doctoral program. This need was also confirmed by administrators at the University at Albany. Syracuse University is the only regional provider of doctoral study in Educational Administration and since it is a private university, the tuition is prohibitably high for many people. The geography of the region also played a major part in this lack of access. According to Dr. O. Ladd, "If you look at Lake Ontario and where Oswego is, and you think where Albany gets students from, e g. places like New Paltz....at least 50% of our students would be in the water, which means you can't rely on geography...who are our prospective students? Watertown... [has]... snow and ice an a terrible winter. Oswego and Watertown get 200--500 inches of snow,

People can't get there in the wintertime, which is six plus months of the year. These people are unserved. So when you are sitting here in Oswego an idea like distance learning looks really good."

Also, according to Dr. A. Maynard, "...although most of the people in the past used to go to Syracuse University, Syracuse's Educational Administration program is down to two faculty members. It just isn't sufficient to deal with demand. Right now central New York has no place to go for advanced training in educational administration." It seemed clear to administrators and faculty at both institutions that there was an unmet demand for doctoral-level courses in what would have been considered Oswego's service area.

Faculty of Albany's Educational Administration & Policy Studies Department had been planning to drive to Oswego to teach the courses. Professor A. Panz indicated that, "...my involvement has always been part of my involvement with the idea of doing a cooperative doctoral program at Oswego. We were planning to do that cooperative doctoral program with Albany and Oswego when a request [for proposal] came out from SUNY System Administration." This "pre-existing theory" was corroborated by faculty from both Oswego and Albany as Professor O. Ladd told me, "...I have to explain to you that this program was conceived without distance learning originally. I think the relevant piece here is that we had been in dialogue with SUNY Albany for a good year or year and a half and we had come to some tentative agreements before distance learning even appeared on the horizon. And then it ... [distance learning]... was an afterthought, really."

More than two-thirds of informants indicated that the *Request for Proposal*, which was distributed to all sixty-four campuses of the State University of New York by the Office of Educational Technology (OET) in August 1995, stimulated proposals from these two departments at Albany and Oswego. A similar percentage of informants also mentioned that the *Request for Proposal* had a very short turn-around time, and had to be responded to immediately for consideration. (It was actually submitted via e-mail.) Many informants also indicated that this available grant money was very enticing to administrators at both institutions.

The Office of Educational Technology received 139 responses to this *Request for Proposal*. This was many more than could be funded. Part of OET's mission was to achieve a balance of available technology and educational access across the State of New York. With limited funding, OET needed to leverage its money in order to support the maximum number of activities. In an effort to stimulate efficiency and economy, the Office of Educational Technology called a meeting in December 1995, to encourage Albany and Oswego (and Binghamton) to get together and submit one proposal.

What is very clear is that there was an extremely short turn-around time for Albany, Binghamton and Oswego to apply for the funds that were available through SUNY System Administration. Although the original Request for Proposal was released in August 1995, it wasn't until December 1995, that a meeting was held, during a snowstorm, at SUNY Albany to bring together the potential partners. SUNY's Office of Educational Technology (OET) selected twenty-eight applicants to reapply. OET recommended that Albany, Binghamton and Oswego consolidate their individual

proposals into a single proposal as there were similar objectives and technologies in the original submissions.

Hence, *EASTNET* was born. The actual EASTNET proposal was written after OET's December 1995, meeting. Representatives from Albany, Binghamton and Oswego worked over the holidays as the deadline for submission occurred during Intercession. A number of administrators and faculty spent Martin Luther King weekend finalizing budgets and program narrative in order to meet the critical deadline.

After the initial screening of Phase I, eighteen final proposals were subsequently received by OET in Phase II. Out of these, only 12 were funded. The actual award notices were not sent out until February 1996, although the first year of the grant covered the 1995-1996 academic year, which was almost over.

A broad range of stakeholders were involved in the EASTNET project. The list includes: presidents, vice-presidents, deans, faculty, technical staff, budget and finance staff, and of course, students. The Office of Educational Technology (OET) initiated the project by sending out a Request for Proposals (RFP). It appears that EASTNET itself actually started with discussions at "the top." It was felt that there were many decisions that needed to be made at the level of vice-president because a number of different institutions were involved and support would be needed across institutional boundaries. Basically, EASTNET was providing funding for the infrastructure that would allow Albany and Oswego's collaboration to proceed.

The administrations at the University at Albany and the College at Oswego received the RFP and delegated responsibility to the deans of the schools within their

institutions. The deans' offices worked with chairpersons, finance and budget personnel, and technical personnel in order to submit the proposal for funding within very short deadlines. Chairpersons consulted with faculty.

Professor A. Monti said, "The department, in consultation with Oswego, made the decisions about curriculum and instructional activities." Professor A. Darrow said, "Everyone was involved just by hearing about it and discussing it. Becoming more involved to the point where I would teach in it...I don't remember precisely but I kind of remember it was general faculty discussions about what we would offer and who would we want to offer it. And there were probably some private discussions...participation was definitely a department decision. ...[the decision]... about who was to teach was made by the faculty. But 'made by the faculty' doesn't mean that we sat down and voted. It's usually more collegial than that. We have semi-volunteers and we have some people who don't want to do it. A few names kind of get passed around and if you don't say "no" formally, you get picked. That's the decision making process for who participates."

Professor O. Ladd also said, " It occurred really fast...we had been involved in writing this proposal about using distance learning in our department with the faculty, but when it got to sitting down with [our technical people] and just doing that little slice that turned out to be EASTNET. It was really quick. [We were] on the phone and e-mail. We are a very strong faculty...we had long been interested in distance learning..."

It appears that the original large planning group broke down into smaller units in order to deal with specific issues such as technology investigation and the actual writing of the narrative in order to get the proposal finished by the deadline.

Dr. A. Maynard said, "It was a collaborative process. Initially we had a big committee and then there was a smaller subgroup that tried to pull together the pieces to create a unified whole proposal as opposed to the five separate proposals that had gone down to Central initially for funding. The initial sub-committee also broke apart and they had a technology committee as well. One sub-committee was pulling together the narrative and there were the other couple of people who were working on the technical specifications. [A dean] handled the sub-committee of the narrative and [our technical people]...handled the tech side. [Our technical people were] working with their counterparts at each of the other institutions. Only two or three people were on each one. We had a very short time frame to turn it around and make a big proposal out of the little proposals. We decided it wouldn't make sense to have overly large committees. It came down to who has a block of time that they can devote to it pulling this stuff together really quickly." This may not have been an ideal selection criterion.

Dr. A. Maynard also said, "A lot of it was individual initiative: people deciding when OET released the ...[proposal that announced that there was money available and soliciting]... ideas and the best...[proposals would be selected.]... There was a lot of interest generated, especially in departments feeling that this was a way for them to improve their enrollment pictures; attract some new students that they wouldn't have had. And to take advantage of expertise that might not be available...[on their campuses and]... they have students who want courses in that area of study. The idea was that it sounded like a pretty good connection. We'd like to see if we can do it via distance learning. We got involved in it; we've been discussing it for awhile; I think that Oswego had a

Master's in Educational Administration...and was looking for a way to service to people in the area, but they knew they would never be given permission to establish a doctoral program. [Oswego was seeking]... a good doctoral program in the state that they could...[collaborate]... with. Of course, [they focused on] SUNY Albany. So that's how the Educational Administration...piece started."

Dr. A. Cates said, "They put in where they knew there were students who wanted this program. Oswego wanted Educational Administration....Albany was going to work in collaboration with Binghamton and Oswego. Put it all together in the proposal...one institution could not get funded without the others. It had to be a collaborative venture. You couldn't work without collaboration."

2. To what extent and in what manner were the faculty (the potential implementors) consulted in the formulation of the EASTNET proposal? What types of communication mechanisms were utilized to keep all important constituencies informed?

There are varied opinions relating to how faculty were involved in the EASTNET project. Some faculty felt that there were long discussions and the decision was definitely a department decision, and others felt that there was no systematic discussion and communication was a problem. The collaborative doctoral program between Albany and Oswego had been discussed for years and many feel that EASTNET was "overlaid" on top of a program that had already been approved by the faculty.

In fall '95, Albany's School of Education followed governance procedures and sought approval from appropriate councils. Professor A. Panz said, "...we put a proposal

to the School of Education's Academic Council and the Graduate Academic Council, to allow students to do their residency if they were in this Albany/Oswego cooperative program, to do their residency in two consecutive summers, which before had not been the case. And that was approved...that was done with departmental approval."

Other faculty members agreed that there had been prior discussions and approval by the collaborating departments. Professor A. Monti said, " There was some information released from the dean's office. An initiative was offered to departments to become involved. There had been discussion of a collaboration between Oswego and Albany. There had been discussion for years about offering the Albany EAPS doctorate at institutions that don't offer doctoral study. EASTNET came as a logical and supporting technology for this idea. Prior to that, travel was an inhibiting factor because it would have been very labor intensive to sacrifice at least a day of the faculty member's time."

Professor A. Darrow said, "It wasn't something that there were private discussions about. [It was at a]... faculty meeting, when I learned about it. Participation was definitely a department decision. Participation was essentially who would teach. The other heavy participation was [the EAPS chair and the dean's office]... and participation about who was teaching was made by the faculty."

Dr. A. Lowell concurred with Professor A. Darrow and said, "The decision was really made by the faculty and [the Educational Communications Center] provided the staffing, the information and technical expertise and so on. I think in most of the cases, that...clearly the administrators did the proposal writing."

Other faculty members also mentioned that faculty were involved in EASTNET. Professor A. Raab said, "... there were faculty, not at the first meeting but at later meetings, involved as representatives of curriculum or curriculum committees, but they were mostly department chairs or the people who were mainly responsible for the implementation of it."

Some faculty members stressed that there had not been much consultation and little discussion about programmatic details. Professor A. Dewey said, "There was this effort to create the Oswego cohort. If they got it up and going they were going to look into our Professional Administrator Option (PAO) for next fall. But other than these general rumors, there was no systematic discussion until April or early May and that [we knew] it was to be actually offered... [The discussion covered]...mostly concepts like the curriculum and how we would treat the group under special arrangements with commitment for a number of years but very little focus on the actual courses we were going to offer till the end of the spring semester."

This was corroborated by at least one administrator, Dr. O. Merz, who said, "I don't know how much the instructors were involved in the design of this program. In looking back over the last year, it's been pretty clear to me, as what we've done is we've tried to overlay the existing program at Albany in the distance environment."

Dr. O. Padin said, "I shared with you earlier, to my knowledge Oswego had been talking about trying to get a doctoral program and it hadn't gone anywhere. The deans of the Schools of Education [at Albany and Oswego] who had met and were constantly meeting... at SUNY deans meetings. It had to be gotten off the ground at [the deans']

level. Once [the deans] agreed to doing it, [and to] make it work but the program has to be pulled together by the faculty...[the deans]...got the faculties meeting and talking and then [the deans] bowed out."

Because of the very short turn-around time, the vice-presidents appointed administrators at the campuses to direct and coordinate the project. Professor A. Panz said, "[A dean] was appointed by the vice-president to head and coordinate the writing. Then the project had separate parts/parcels. These were parceled out [to the deans' offices]...all this was done...without consultation with the faculty or anything like it...in a large part because we already had the agreement and the faculty had already agreed to it. This was all done in December/January over break... that was December 1995, and January 1996,...if we had gone back to the faculty, and tried to get clearance, there was no way it could have [been] done in the time we had."

Even though the actual proposal was written primarily by administrators, faculty were very much involved soon after the award notice was received. Professor A. Panz said, "...later on faculty were brought into the process...later on and earlier on...because EASTNET was tacked on to discussions that were occurring anyway. It wasn't the origin of the program....I can remember a meeting with [EAPS faculty and the vice-president] and...a couple of other people. It was about this and how we were going to do it, and...the... chair (at that time) of the department...but that meeting must have been after EASTNET was approved."

Faculty involvement was corroborated by others, as well. Dr. A. Maynard said, "If you are talking the academic side of it, the department has complete control over how

things are done. The degree is awarded by the department. They control what courses would be offered, and when they would be offered, teaching them, and being in charge of redesigning their courses if necessary. In terms of the choice of technical aspects, in terms of the equipment, that was left to the technical experts."

Dr. O. Taft concurred, saying, " ...[the faculty]... designed the courses and the partnership. They had a primary role." Staff of SUNY System Administration discussed faculty's role in EASTNET during the interview process as well. Dr. S. Cady said, "I have a sense that they [the faculty] played a significant role in the design and implementation, certainly in the course content. Certainly [that was] left to be a local campus issue. [System Administration] wouldn't get involved in it, unless to give some information about experience in other distance learning experiences."

Dr. O. Padin said, "That was faculty's baby. In a place like this the SUNY system, faculty control the curriculum, so they had the most...all we did was try to provide the opportunity for them to get to work and discuss this with other folks. It was really the faculty in the department who developed this particular program. Because they would have the better sense as to what the courses should be..."

Faculty also had complete control over who would be admitted to the doctoral program. Applications were made through normal processes, and students receiving the recommendation of Oswego's faculty had to meet the same requirements as those admitted to the EAPS doctoral program in Albany. There was concern on the part of Albany's faculty that some students were admitted without the necessary background. It appears that admission decisions were made over the summer when many faculty were

not on campus because of the late approval and subsequent late promotion of the collaborative doctoral program. It appears that there were programmatic, financial and political pressures to begin the program on time in fall '96, but perhaps consideration could have been given to postponing the program for one semester.

Communication can be difficult on even one campus, but communication among two campuses and a central office can be extremely challenging. It appears that EASTNET is a victim of the communication problems that often exist in higher education. Information was released from the various deans' offices and different mechanisms were used to keep constituencies informed. The evidence indicated that e-mail, postal mail, telephone, faxes, in person meetings and video-conference meetings were all utilized over the months that EASTNET was being implemented.

Professor O. Dahl said, "I was told by my department members definitely, about distance learning and what we were doing with it. As far as EASTNET goes, I received a lot of information over the e-mail about it. I went to a video-conference with our department; talking about the EASTNET project and how we were going to use EASTNET specifically in our program. We started talking about that in meetings. I remember being in our studio, not really faculty meetings, really teaching meetings with the other sites that were on there. Not just the doctoral program; we were talking more generally in terms, about the whole technology, and lesson plans, and people changing."

Administrators also concurred that there were various means of communication among participants. Dr. O. Padin said, "We communicated between letters, telephone calls and joint meetings...in Albany, whereby you had a team of the dean of the School of

Education, the three department chairs, the director of the Graduate School and one time, the provost. [Administrators and faculty] went to Albany and [to Oswego]... we did meet quite frequently in hashing out the concerns and division between the College and the University in coming up with a program that all of us can live with."

On the other hand, some administrators and faculty acknowledged that there could have been better communication regarding EASTNET. Professor O. Dahl said, "Lack of communication, between and among everybody. But we are working it out. We feel... that we have especially made an attempt to be there for conferences and video-conferences. Sometimes ... have gotten on and been disappointed at the number of people who have been on. [In Albany] the whole department is not involved, so is it realistic to expect everyone to be there?"

Dr. O. Taft agreed, "...we may need more traveling between Oswego and Albany between the faculty. Or more PictureTel meetings. This can be a challenge to fit into schedules that are already totally full with other responsibilities."

3. Did the administrators and faculty have experience in this or in other forms of distance education? If so, what types of experience? What training was conducted for administrators and faculty?

There were very different answers given to these questions, but approximately 70% of all administrators and 50% of all faculty that were interviewed had at least some experience with various forms of distance education before being involved with EASTNET. These included satellite courses, closed circuit TV courses, training, video-conferencing, and general administration.

Most administrators (at Albany, Oswego and System Administration) had "non-teaching" experience which included technical, training or using the technology for meeting purposes. Dr. S. Lebel indicated "...five years...I was charged with implementing [a distance learning initiative.] I facilitated videotapes, set up low technology. We used e-mail and fax. [We discussed] who would do the training of faculty because faculty were nervous. Oswego was supposed to do it, but it may not have been satisfactory."

Dr. S. Cady who had more than five years non-teaching experience, said "...can't say that I have personal experience teaching in it. [Additionally]...my experience is also in facilitating, coordinating, consulting [on] distance learning."

Dr. O. Merz indicated that the institution's president had requested Oswego's involvement three years ago, adding, "In the last two years, ... I have done a lot...we were talking about how we could see distance learning would come on like a juggernaut. What could we do to get prepared to adapt to that environment? We were doing nothing at the time. We arranged to set up a committee to talk about what we could do. We got some funding from our local senator."

Some administrators had experience with different types of distance education technology. Dr. A. Cates had more than five years experience and said, "We originally started out with satellite communications, which, again, satellite is only one-way video, two-way audio."

Many informants minimized their experience with distance education, perhaps because the technology is constantly changing and they feel that older experiences may not be relevant. Dr. A. Jenks indicated having some experience, saying, "I have very

minimal, but one experience, two years ago. I was intrigued, and I became very enthusiastic about the possibility, because I was the one with the experience. I had a wonderful experience... I designed a course with my colleagues. I learned a lot."

Dr. A. Maynard indicated familiarity with distance education and said, "I have not actually been up in front of a class....giving a lecture via distance learning. All of the times that I have been involved has been behind the scenes. Helping people to design, deciding what equipment to be used...assisting them with training if necessary."

Many faculty members interviewed also indicated some experience with distance education. Again, this experience was with very varied technologies, such as closed circuit TV, computer-mediated courses, and includes "non-teaching" experience, too.

Professor A. Monti said, "Many, many years ago I did teach over closed circuit television. We had several hundred students scattered in different rooms and several professors would teach from the TV studio."

Professor O. Dahl indicated one to two years experience, adding, "I did a whole lot of research on the theoretical and empirical base of distance education. I wrote some ...papers supporting distance education [and] its use. The other stuff that I did, was in computer mediated communication-- the Internet."

Professor A. Dewey indicated some experience in distance education, saying, "[Through] Empire State ...and I was somewhat familiar with what they have done in [another state]....so I have those two sort of sources of background....and I tried the e-mail and the use of the Web in some extent in [a previous semester.] It wasn't like I

was working with a second remote group. That was kind of learning enough about technology to want to try it, so this was my first experience."

Professor A. Raab indicated some non-teaching experience with distance education and said, "I participated many times in meetings, but not classes, in which the technology was used. And I have been to a fair number of conferences and training sessions. Although I haven't actually taught, I think I have a fairly good overview of the issues that are involved."

Professor A. Fall indicated some prior experience with distance education and said, "Prior to this, I made contact with [OET] at SUNY Central...to explore ways of taking my ... class and delivering it [around the state], because I had some requests from students. So I was originally exploring distance learning to do that. I had an interest in it. That's why I, quite frankly, got involved in it the early stage: thinking I could learn enough about it so that I could do my course."

The other half of the faculty interviewed, including two who taught via PictureTel in EASTNET, had no prior experience with distance education. Professor O. Ladd had no teaching experience in distance education but said, "I was there [mainly] to make sure that the pedagogy was working. So I was interested in....'do the students have the reading assignment? Does the professor have their phone numbers?' I was interested in reading assignments, books...and registration; those kinds of things."

Professor A. Darrow said, "Before this? None. And I wouldn't have read anything about it... a graduate [assistant] gave me some materials, and I read them...a fair amount of reading. As with lots of things that you get into, that you don't have much

background in, probably I could have done without a vast majority of that reading, and on a skill level, still been on the same level."

Professor A. Panz said, "I had almost none. I think I had seen a demonstration of PictureTel once. I knew it was possible. I assumed it would be something like 'McNeill-Lehrer'...where they interview people and you can see them on the screen. And I thought, that would work for teaching. But, I had no knowledge or experience with it at all, until this began. Those with the experience and the knowledge, and the technical knowhow and the enthusiasm for distance learning were the Oswego people...they are very, very proactive, and they're doing all kinds of things on TV and they're doing a lot that way. Distance leaning all but died here. They had a facility and they closed it down here a couple of years ago. I don't know the details about that, but they had some kind of facility for doing distance learning, maybe by satellite, rather than over the telephone wires, but it was expensive and with budget cutbacks, they closed it down...and then suddenly distance learning becomes HOT, and we had to open it up again."

There is documentation that indicates that training was offered for two days each in June 1996 and in August 1996. As with most questions, there were very different comments made on the question about the availability of training. Professor A. Monti said, "There were opportunities for training available...to faculty members who wanted to find out more about instructional techniques."

One of the professors who had taught via PictureTel said, "[we] were shown...we went to training sessions. Whatever... we learned. Certainly, there were no restrictions, [such as] 'you shouldn't do that pedagogy.' There might have been some things that were

asked for that weren't available. I never had a request. I didn't know enough, first of all. I did read and learn more, but just by the way I teach, my requests were modest. In terms of utilization of materials, I'm fairly conventional. So there was nothing that ever came back that was like a major policy decision. It depended on resources and what professors wanted, in the formulation and then as things continued. There were some things that were promised by the grant and sometimes they weren't there."

Professor A. Darrow said, "I went to something in SUNY Central. That was pretty substantial. A long period of time. We asked a lot of questions. We got answers not just from the people at SUNY Central, and [others]...it was fairly comparable session here...with [the Educational Communications Center], on-campus and there were several other times when...we went over [to SUNY Central], together or separately, to monkey with the material. There was time available. [The equipment] was supposed to be set up here. Somewhat in advance. It wasn't, so [another faculty member] and I went over during the summer. We were working on stuff that wasn't going to be exactly the materials that we had to use. But I don't want to make that a big deal. Because, it was, for me anyway, just breaking the ice. At the same time it wasn't just the pure technology. I remember asking about pedagogy on the technology, and getting what I thought were fairly reassuring answers. I thought the training was at least adequate."

Professor O. Dahl also said, "The training, ...was us going and actually fooling around during instructors' time. We weren't actually teaching on it. Looking at technology, we kind of went through it with our students. We haven't been specifically trained on it; but we have had exposure to it. We are not really teaching on it yet. We'll

probably just sit down with folks who have been doing it and learn the little tricks and then go from there."

Professor O. Dahl said, "[regarding pedagogical training]... none at all. I had training myself, in the sense that I did the research and the basic thing that I came up with, is that you need to rethink your total pedagogy and delivery of instruction. It is a paradigm shift...Joel Barker talks about it when you go to a paradigm shift, everything goes to zero and you basically start over and one of the problems with doing the PictureTel distance education is that a lot of people think that, 'I am basically going to teach the way that I taught. I'm just going to broadcast over the TV and everything is going to be fine.' No. You are dealing with a fundamentally different pedagogy in the way of teaching; with the PictureTel teaching sometimes you don't start from zero, you start from what you already have, and try to adapt and that is not the best way to go about it."

One of the faculty members who taught via PictureTel said, "...you know the instructor had no training? Maybe an hour total...from the time the conception of EASTNET began, until walking into that classroom. It was a familiarization thing ...seeing down at SUNY Central what the overhead cam was going to be like. I went down and saw the actual studio for about ten minutes but none of the...[equipment]... was turned on."

This same faculty member also said, " Again, it was in August, the training was not a training, it was a familiarization. Just the general equipment ... but the ... [information]... that you really need to know... I never did get trained in the computer they

had set up for actual use there. I could have used a lot of my data driven exercises that I have used in my class, but...[this equipment]...just sat there. And the document cam, I used it a lot, but again I think that there were times that if I had been more on top of what was available I'd use overheads and I'd use conventional overhead projector and I'd use the document cam. I'd have them more interrelated into a better flow for the curriculum. But I was always trying to catch up. So I didn't have any training in that either, I just sort of learned it."

Administrators also agreed that there may not have been enough training offered to the faculty. Dr. A. Maynard said, "[regarding training]...not a lot has taken place. There were some training sessions that were held in August." Speaking of the support given to faculty, Dr. A. Maynard also said, "[The graduate assistant] was there from the first semester when it was being put together and was involved in a lot of the day to day assistance of faculty in terms of getting them modems and getting them installed, assisting with getting them online. Each of the programs was provided with a chunk of money and they could use that money as they saw fit. And most of the time if you looked at it, it was used mostly for faculty development, and probably some support services like a graduate assistant, but in a support role for the faculty members who were doing the distance learning teaching that semester, being there in the background to help. He acted as a liaison with the students at Oswego, coordinated some of the pieces there. Some of the hardware and software issues, and [the money was also used for] some recruiting that was done by the department."

Dr. O. Merz said, "Some training over the summer...introduced the technology and invited the faculty to come in and look at it, and play and fiddle around with it. Get familiar with it. Some faculty came in and others did not. To the extent that they would go into that first presentation not really sure of themselves. But, I have come to feel in the last two years, now that I have done it a lot [of distance education training], that it's not a big deal. This particular technology is pretty transparent to what we do in the classroom. And the key is to find your spot, where you want to stand, so that you can see the cohort out there in cyberspace and the one you are working with in the classroom."

Dr. A. Cates said, "...ones who needed assistance, there was money to hire assistants. There was money in there to give them any travel that they needed for training."

Professor A. Fall said, "[I had] no formal training. I've watched the two instructors. I had a one hour training session at one of the conferences, but that's it. I think the faculty did a terrific job under the circumstances in adapting and coping, but I must say that they were given no training..."

Dr. A. Lowell said, "In implementing the project we've had to do a lot of work to motivate faculty...through allocation of resources: graduate assistantships, support, and training for the use of the technology. But probably the most helpful tool has been the allocation of laptop computers, which was not in the original proposal, but was a resource we found we could use or we could distribute. Each program [could] decide how they were going to distribute them."

4. How do faculty implementors vary in perceiving electronic distance education in terms of their own philosophy of education and their own preferred styles of teaching and interacting with students? How likely are they to become involved and to stay involved?

Again, varied answers were given to these questions. Faculty are divided in their support of distance education. Four of the seven faculty interviewed favor, or at least see the value in it; two view it neutrally and do not see any real advantage, except for access, and one saw no advantages. Certain themes emerged that were woven through faculty members' comments. **Interaction** between student and teacher was mentioned very often. Many referenced the importance of this student/faculty relationship to the teaching-learning process. The majority felt that distance education is a strategy that can be used if the "ideal" of in-person instruction can not be achieved because of geographic or other considerations.

Professor A. Monti said, "If you believe that teaching is the very kind of intimate affair with a direct relationship between the student and the teacher, it is true that with the new technology the student can ask questions. But there is the gap of the ether, it depersonalizes it, or inhibits the process of asking questions and answering them. There is the danger that the technology becomes primary, mainly how to use the instruments, and using the instruments correctly and teaching for the technology, rather than teaching for the substance of the course itself. I don't see how it can possibly improve pedagogy over the direct contact between the teacher and a student"

Professor A. Dewey said, "And when they had identified [my course] as one of the courses to be offered. I was thrilled so I thought I would use the summer to rearrange my notes using the e-mail a little more. What I was really excited about, is that I had heard of this idea of PictureTel and this idea of the interaction, [with an] interactive classroom, but I was wary of how it would fit with the other two technologies. Really from my own professional interests, I wanted to see how the three ways of communicating would mix together."

Faculty were very open about their personal styles and philosophies of teaching. Professor A. Darrow said, "This keeps pretty close with the interactive teaching that I have in mind." Professor A. Dahl said, "My personal philosophy is more learner-centered, more active. The same thing with distance learning. You have to use the tool correctly [or you have] twice the boredom. It's the same thing with distance learning. If you have a poor product to begin with, it's not going to improve by broadcasting it over hundreds of miles. In fact, its probably going to lose a lot of quality. The interactive part is difficult, especially with PictureTel. But with a listserv, it's increased."

Pedagogical considerations held a high priority for faculty. Albany's doctoral program has an excellent reputation and the faculty have a strong commitment to maintain the same level of quality in this collaborative doctoral program offered over distance education. Professor A. Darrow said, "I think that the class went very well pedagogically. I don't think much was lost by having the split sites."

Most faculty mentioned that the pedagogy is a critical issue. Professor A. Dahl said, "The big thing is the pedagogical issue. It is a brand new technology, a brand new

way of teaching, and therefore you have to reconsider, back to zero: What is teaching? What is learning? What is the role of the teacher? What is the role of the learner? What is the role of content?"

Effectiveness was certainly a big issue for the faculty. Professor A. Dewey said, "The grade range stayed stable, and the extent of completion, but I really think it gives you an indication of that distance learning format and the use of the three technologies didn't add or detract from the impact on the students. The positive side is that I think that people are feeling much more confident about going to the [comprehensive examinations.] Because instead of having to just rely on a study group they have all the web access and they can always go back to it. That is the good side. Add to that you have to do your own research. [A student said] 'I stayed up all night just following information.' And I said now you see, this is closer to graduate education. If we had some lead time, and let the students get into the information early, it would work like a charm. They'll know it's available, and they know it's going to be discussed during the semester, instead of trying to stay up with it all, while trying to stay up with the other class, it would work...it will work. I can see some adjustments in instructional role, some adjustments in what I have learned and how I get the transfer of instructional role to the students."

Many faculty members mentioned the fact that the **subject matter** of the course must be considered before offering a course through distance education modalities. Professor A. Monti said, "It depends upon the character of the subject matter. Some courses, for example where there's a great deal of methodological techniques to be

learned, that can be done just as effectively through this medium. On the other hand, there are other kinds of subject matter that are much subtler, that require a great deal more interaction...for example...[EAPS] ethics course where [the professor and students] talk a lot about case studies, where people look at each other when [they] raise these questions. It may be easier for statistics, where an instructor puts a formula on the board and the student copies it down and there are not many penetrating questions about the subject."

Discussing computer-mediated distance education that utilizes the Internet, Professor A. Darrow said, "There seems to be a push right now here more for an Internet kind of distance education. And I don't rule that out. I don't know much about it; I haven't had experience with it. I haven't read about it. Some people, whose judgement I value, like the idea. I am very skeptical, because the kind of teaching we do, particularly at the doctoral level, I just don't see having a very immediate classroom involvement. This [PictureTel] keeps pretty close with the model of interactive teaching that I have in mind. The other kind of distance education, where you get assignments and you feed assignments in and out of the Internet, and you are not directly, visibly interacting with the professor-- I have reservations about that for a doctoral program."

Other faculty members expressed similar concerns about using computer-mediated distance education for a doctoral program. Professor A. Fall said, "There may be courses at the doctoral level that just are not amenable to distance learning technology. Those are ones that require a lot of teaching by the Socratic method. Or a lot of interaction and dialogue in the class. Technology is really not too good for that."

The main theme that pervades this study is **change.** Every interview, whether with an administrator or a faculty member, whether in Albany at the University or System Administration, or at Oswego, referenced change that was occurring and its impact on higher education. One of the biggest changes that is occurring is the transferral of the ownership for learning from the teacher to the student. Distance education demands that students are responsible for their own learning and those who are internally motivated are the most successful. This is more important than being technically proficient, because the technology being used in EASTNET is simple enough to be utilized by any student in a doctoral program.

Professor A. Dewey said, "... we spent the semester transferring ownership from instructor to student. In other words you are transforming not just the meaning of the content, but also, the expectation of the student as an individual to the technology to get their own information. But you have to recreate the student. The students have to adjust switching to the cameras on both sides. You have to be aware that students in both sites came in with a spectrum of different experiences and familiarity with technology. So you had to "buddy them up" very quickly. The ones who knew had to teach and help the ones who didn't have the capability from the most basic stuff...e-mail, ...all that takes activity that almost by definition, ...[excludes]...the professor."

Much of the distance education literature stresses that communication and interaction with students can be of a higher quality because students have more time to reflect on and respond to the subject matter. Professor A. Dewey said, "...it developed a sense of independence, in taking on the subject, in dealing with the information, this was

a godsend for me...sort of waiting for your class to say your basic arguments for you. You have already put a lot up on the Web, so people have had a chance to read it. The questions were definitely better and the discussions more substantive in terms of the content...."

Professor A. Panz said, "...how hard could it be...people who knew a lot about technology...it wasn't who you would expect would be worried and nervous....and who was comfortable...who has a lot more computer and other kind of technical knowledge, who really didn't want to do it and was greatly relieved when [they] didn't have to. It was at one point [there was another] person who was going to do it...who was ideal for it ...but...[this faculty member] didn't want to do it and it turned out that it didn't work out programmatically and...[s/he]...was greatly relieved. I expected...[that person]...to be somebody who would have been tickled to do it because...[s/he]...is up-to-date on technology and there was almost an inverse relationship."

Most of the faculty members interviewed had positive thoughts about the use of distance education in the **future**. Many will stay involved with not only EASTNET but with other distance education modalities.

Professor A. Darrow said, "I'm not an authority. Generally, I'm not an easy enthusiast of new things. But I am enthusiastic about the idea of distance education. I've spent some considerable time since trying to compare it to what it would be like doing something bigger. More students, larger scale. Maybe international. So I like the idea of where it can go. My biggest disappointment, in a sense, other than just the outcome of three students [which later grew to 11 or 12], was we put in so much time for a little

result, I think we could have accomplished a big result. But I learned, I saw I could teach on this kind of thing."

Professor A. Dewey said, "I think that coming back to the bigger question of EASTNET and the project...it survived that initial bashing of the pilot test. I'm very enthusiastic that if the project continues at least the relationship between technology and instruction, and at least the steps are known now rather than unknown. It will be easier, but there will still be a ton of folks who won't be able to adapt. But for those who are enthusiastic, I think it's very easy to see what the future can be. I can see some adjustments in instructional role."

Professor A. Fall said, "The experience... distance learning isn't up to the same level of quality or quantity of instructional material that we can deliver via the traditional method. But I think that very quickly that it can be brought up to speed. I think the second or third time we do this, will be very good."

5. What are the differences between faculty and administrators in their views of the benefits and costs of distance education?

Basically, there were no differences between these groups of administrators and faculty in their views of the benefits and costs of distance education. Each group contained people who were very enthusiastic and saw the potential for the type of distance education utilized in EASTNET to make contributions to higher education in the future. Each group also had members who saw many advantages and some disadvantages

of compressed video. Both administrators and faculty identified limitations of the technology being used and had concerns that it may not be cost-effective.

Universally, each agreed that access is the primary advantage and the most potential for distance education. In the case of EASTNET, Oswego is in a very isolated area and suffers treacherous winters. It is very difficult for the adult, working student to attain higher education at the doctoral level. Distance education can make it possible for students who have many competing responsibilities to avail themselves of graduate education at a location that is much more convenient for them via a project like EASTNET.

Dr. A. Lowell said, "It brings the capacity for classroom interaction to remote sites where it's a little too far to travel. I think it's pretty clear, from all of the literature review I have done, it appears that the single most important advantage...is that it makes accessible a degree program that otherwise would not have been accessible."

"Professor A. Raab said, "The primary advantage is that you can reach a larger audience of people and sometimes a different audience of people than you would through normal classroom technology. In terms of things like classroom interaction and ability to do various kinds of things to teach various kinds of classes, I think they are about comparable."

Dr. O. Taft said, "The obvious is that it increases access. But it also is more difficult for students who do not have access to technology. They must be independent learners. We must design a system that can be augmented with other venues. Students can be inspired to do more, to continue on with their studies." Dr. O. Merz said, "It

extends access...to people where they live and work. It potentially makes it possible for people in isolated communities to have access to sophisticated higher education."

Dr. A. Cates said, "The first [advantage] is obvious, the distance...students from remote areas who just can't travel have the opportunity to...it eliminates the travel. You do have, if operated correctly, you do have direct contact with the professor, comparing it to satellite which is one-way video."

Another area of general agreement is that of effectiveness. Only one faculty member was totally disillusioned by the technology and did not think there was enough value in the distance education experience and suggested that driving to Oswego would have been more desirable. Others agreed that it appeared to be as effective as traditional methods of education, especially if the technical problems could be alleviated.

Professor A. Raab said, "I don't have any question that you can teach anything that you want to using this technology." Further discussion elicited the idea of mixing technologies to make this type of distance education even more effective. Professor A. Raab added, "The way I see courses being run well, is to mix all the technology as a framework: a Web-based site; discussion groups, chat groups, e-mail correspondence with the instructor. And then use video, asynchronous video and occasional classes using synchronous methods. I think that is the best integration of the different technologies. You can use each one of them to its real advantage."

Dr. S. Lebel said, "There sometimes is better interaction and p rticipation because of this time to consider." Dr. S. Cady said, "...I have heard faculty say that the quality of

student interaction and responses using e-mail is greater than the experience in the traditional classroom."

Dr. O. Merz said, "...there is no literature that says that it doesn't work. There is a vast amount that says it does work and in fact in some disciplines it is more desirable."

Professor A. Dewey said, "I just want to say that I personally, am still enthusiastic. I think it is doable." Professor A. Gill disagreed, saying, "I don't know of any advantages. It limited the kinds of things that we could do. It limited me having face-to-face personal interaction, which I always enjoy. I didn't ever feel that I arrived at a personal relationship with the people in Oswego and Victor. I think because of that, and because I was always so concerned about making sure we were reaching them, I don't think that I was ever comfortable with it."

Similarly, there was agreement between the groups of administrators and faculty as to the cost effectiveness of distance education. They all basically believe that the jury is still out. There were many thoughts expressed relating to the very high capital investment in distance education. There were many doubts that these costs would ever be recouped due to the small enrollments in the EASTNET project and there were concerns expressed over and over again as to the financial support for the continuation of EASTNET.

Professor A. Monti said, " It is a heavy investment for the institutions to make any kind of extended commitment. There's kind of vagueness about how far the commitment is and how long it will go."

Professor A. Dewey also said, " I think it is doable at the department level, but, from an organizational standpoint, you can't get away from the fragile nature of the project: from the financial uncertainty of a frontloaded situation like this..."

Professor A. Raab said, "The disadvantage is...no matter what anyone says...is that it is phenomenally expensive. It's far, far more expensive than normal face-to-face technology. And that is a major, major issue for someone like us who doesn't have funding..."

On the other hand, one administrator and one faculty member discussed the fact that, at this point, it may seem expensive to offer distance education courses for a small group of students, but that there will be large savings in the future. These savings may be from using a combination of distance education modes and technologies and from the savings achieved by building fewer classroom buildings and facilities with their attendant high maintenance expense. Discussion was held regarding the savings to the overall SUNY system as individual campuses join together to collaborate on programs and thus avoid duplication of programs.

Dr. O. Merz said, "Another advantage, I think ultimately, it is going to be less expensive to offer higher education. My colleagues at our union, United University Professions, scream when they hear that. But the fact is, I know on this campus, looking at the cost of delivering distance learning, and I saw that it was going to be a high cost. It may be that high cost really turns out to be low cost [when the cost of facility maintenance is compared.]"

EASTNET keeps doctoral education at the research university level but gives access to students in areas not served by a university center and can present large savings to the SUNY system as a whole.

Professor A. Panz said, "...the obvious advantage is that you can deliver instruction without driving, especially when the distance is a long way. The advantage for Albany and I think for the University System Administration, is that it undercuts demand for doctorates in institutions that don't have them. It undercuts demands for programs in institutions that don't have them. For example, Oswego knew already that they would never have a doctorate, but that they wanted to get involved in doctoral instruction, and distance education was the only way they could do it. The same was true in Russian. They lost their faculty member or two in Russian, and knew they would not be able to hire another. But they knew they could have instruction in Russian from Albany via PictureTel. That was the kind of idea. It means that as people look at the system as a whole, and they are worried about proliferation of degree programs, that you can reduce the proliferation of degree programs if you have distance learning. That's where the real savings is."

Competition was mentioned a number of times, but primarily by administrators. There appears to be a feeling that SUNY as a whole is playing "catch-up" and that there has not been enough investment or research into distance education by SUNY. Major universities, especially in the western part of the country, are heavily invested in distance education and collaborative adventures. These "out-of-state" institutions have been

sending courses all over and are becoming competition for SUNY right here in our New York State.

Dr. A. Maynard said, "As you go to meetings...distance learning, distance education has become a buzz word; everyone is grabbing on to it, assuming that it's going to be the answer to everybody's prayer. And in a time of shrinking enrollments, people think, 'oh my god, let's go out and boost the FTE.' We go out and we grab people from all over, whether it be the state, the nation or the world, literally. I hear it all the time... people are concerned about playing "catch-up." Other institutions around the country jumped into this a little sooner. Now that new virtual university being set up on the west coast by the governors of California, Oregon and Washington...[It is] a big project out there. Part of this is that there is pressure that people are imposing on themselves and that if we don't jump on the bandwagon now, we'll be left behind and when we get in there won't be any demand. We won't have positioned ourselves well to compete."

Dr. O. Taft said, "There should be no geographic boundaries with distance learning. Other states are coming into the...area. Some offering courses for only $300 for graduate education to teachers."

Dr. A. Jago said, "Distance education is the future. The University must be supportive of life long learning. To remain competitive, for example, Penn State and UNC all offer on-line Degrees. We, SUNY, must know how valuable distance learning classrooms are versus the Web."

Dr. A. Jenks said, "I think there is a sense of competition and I also know of a few other aspects here that I can certainly understand for senior administrators at universities

and colleges to adopt a point of view, a well thought out one, but adopt a point of view that says, 'we better get into this or be left behind.' And I hasten to add, that's not at all adopted, or exclusively certainly, on the basis that [the University of] Phoenix is doing it, and there are probably nine or 10 or 11 mega-universities too, that are out there beaming in lessons and the interesting point is that none of them are in the United States. They're beaming in from outside. And there is another angle here. That while some people think that much of, or that some of, distance learning is a bit not up to standards as, or less than, traditional education, which is countered by the notion that some of your most select institutions, already, for example, Stanford offers more Masters' Degrees to residents of Seattle, than they do in Palo Alto. And I have forgotten whether it is an MBA or Engineering, some 230 diplomas were granted last year by Stanford. So here you have an elite, highly selective institution packaging some of their courses for delivery by satellite. I think it is a wonderful direction to go."

Disadvantages were discussed to a lesser extent. Primarily, in addition to cost, they consisted of concerns about personal interaction with faculty for students who could not deal with the technological communication.

Dr. O. Merz said, "Disadvantages...one is there are some...lots of students who would benefit from having real good personal interaction with an instructor, which is widely unavailable anyway, even in the on-campus environment these days. Many of the students that we are attracting through distance education haven't been to college in a long time, if ever. They ought to have some really strong advisement. They ought to have mentoring. They are the kinds of students who tend to need the services that we provide

on-campus in the Office of Learning Services area. Remedial help.... that kind of thing. We don't provide that via distance learning."

6. To what extent did technology issues evolve during and after the introduction of EASTNET?

Technology problems were evident at the beginning of the EASTNET project and continued through the end of this study in May 1998. The initial problems appear to be due mainly to the late receipt of the grant funds which subsequently resulted in the late delivery of the equipment, which only arrived the week that classes began in Fall, 1996.

Dr. O. Merz said, "We had our technical issues to work through. We never got our equipment until the week that we were supposed to go on the air. The program wasn't solid. There were some issues about the program that were not nailed down."

Professor O. Ladd said, "...we had a lot of problems in the fall ['96] with the technology...a lot of problems, and more frequently than not...the PictureTel did not work."

Professor A. Dewey said, "We spent the first three or four weeks of class getting the bugs out of the individuals' technology. And it was painful. The interactive classroom wasn't hooked up to Oswego on the first week. In fact the microphones didn't work for the first four weeks. We had one Mic.. instead of four." It was such a mess at the beginning of the first several weeks, that in the second or third week, [the professor] went to the remote site and taught from there..."

Dr. A. Maynard said, "Part of the problem in this first year was that the equipment was not fully set up at some of the remote sites...Oswego did not have its equipment in place when they should have. They made a small...[error]... when they ordered the equipment. It was not exactly what they should have ordered. A small compatibility issue; they needed to take care of that. And as I recall, during the first couple of lectures, the technology wasn't in place. They were using two-way telephone communication. They didn't have the video side of it. That was interesting for faculty."

Many of the technological problems that occurred might have been avoided if the implementation had been delayed. There is no evidence that suggests that consideration was given to postponing the initial semester that courses would be offered. The conditions of award state, "Project Director is responsible for the grant and a 'best effort' plan that implements the project as it was specified in the accepted grant proposal under the funding specified in the attached fiscal summary. Please note that capital funds can be carried over into the next fiscal year; operating funds must be expended in the fiscal year designated." It appears that some of the funding would not have been affected if classes were delayed until spring '97, but operating funds may have been lost. A delay of one semester would have allowed faculty and administrators the lead time necessary to become comfortable with the equipment and given technical staff the time to discover all of the technical glitches. However, a semester's delay would have caused scheduling problems because the doctoral program follows a certain fall and spring course schedule and the students in Oswego would have been out of alignment. This may have made it impossible to start one semester late. Since this funding originated in the Legislature,

there was probably strong political pressure to "show results" immediately and the delay of one semester may have caused concerns about the receipt of funding for future projects.

Another issue that evolved and affected the use of technology was the inadequacy of the telephone [ISDN] lines in the Oswego area. It appears that administrators at Albany and Oswego spent a lot of time and effort looking for internal problems that did not exist. The transmission problems were being caused by the telephone lines.

Dr. O. Merz said, "We installed all of that equipment back in September, and it was not easy getting started....all of these sites, Binghamton, Oswego and Albany are all connected by ISDN lines. ISDN is still a work in progress. The NYNEX telephone system...[was a problem and] sometimes we got circuits and sometimes we didn't. We'd try to bring a class in... and we couldn't make the connection. The next time we would. We just went crazy until we found out the problem wasn't us. It was in the telephone system."

Professor O. Dahl said, "...there were real problems with the technology handshaking, and you can't tell that until you are up and running. You find out that the phone line isn't strong enough; things that you would never have thought of ahead of time, and nor should you have, unless you have been through it a couple of times. I think it's adequate...maybe frustrating at times, but unless you are "Kreskin" and can see the future, I don't see how you could have done it a lot better. The phone lines in Phoenix (Oswego's extension site) are antiquated."

Another problem that arose at the beginning, was the setup of the classroom in Albany. There were concerns about the placement of the cameras and the adequacy of the monitors and the microphones.

Dr. O. Merz said, "If it is set up so it is awkward for the professor to use it, it should have been considered in the design of the room...[the equipment should] be so portable that if the instructor wants to change, we can arrange it ...trying to be flexible so that an instructor would feel comfortable."

Professor A. Fall said, "There was always something---a glitch. But more importantly than that, the physical arrangements...weren't conducive to good learning. A lot of the problems were the perception of the video camera and the quality of the microphone."

Professor A. Gill said, "I think they are going to have to improve the equipment that is there. The monitors have to be larger so that you can get a view of everyone in the group and be able to focus in on individual people."

Many of these minor problems were eventually worked out but concern continued that the equipment that was purchased was not the quality that should have been used in EASTNET. Administrators and faculty remarked about the difficulties in making choices with the limited resources that exist in SUNY today, even though this project had funding through OET and System Administration.

Summing the resource issue up in one sentence, Dr. O. Taft said, "There are always choices. Always choices to be made as to how to use resources."

Professor A. Gill said, "We had two sites and I could only see one group at a time. There is also a delay between watching them speak and hearing them. The third thing is that we probably lost the group that was over in Victor for four sessions. Once they went over and joined the Oswego group. It was also a problem for the students here who were always waiting for me to begin. We always had to wait to get connected up. Basically, if this was state of the art equipment that was being used, and state of the art technology, I really have very negative kinds of feelings towards it."

Professor A. Raab said, "In retrospect, that was one mistake we made....is to always do it as cheaply as you can and that is a big, big, big mistake in distance education...[we need] more sophisticated equipment. Better equipment. And we are still having two to six breakdowns per class session. And...we are in the middle of our second year. We shouldn't be having that kind of problem. I thought it was normal until, I started talking with other people who were doing [compressed video] and who were shocked that we would tolerate it."

Some technological issues that evolved concerned students directly. The first considers the concept that often appears in the literature about "elitism and distance education." There are real concerns that distance education, because it demands certain access to and knowledge of current technology, is producing elitism in higher education. Students must have access to certain equipment such as computer, modem, and services including access to a network for e-mail and list serv and research capability. EASTNET, while increasing access to this doctoral program, did require that students have this technological capacity.

Professor O. Dahl said, "I think one of the biggest technological issues for us is access. Not so much of PictureTel, because that's kind of institutional access, but if you break it down, and you start using your Internet to support your PictureTel, websites and Internet discussion, all of a sudden you have a problem with access. People say that they don't have access to a computer. We say, 'you have to get one....you might have to shell out for some major stuff at home.' It's getting education out of the elitist class. Here in the SUNY Albany doctoral program, we're not talking about that. We are not talking it up to everybody; it's still a fairly closed system; has to do with how...do you pay for it? The equipment, etc."

Faculty were also concerned that students must also change with the inclusion of distance education, and time has to be allowed for students who are not as technically proficient as others to be brought up to speed. Professor A. Dewey said, "...you have to recreate the student. That it happens, but you have to be aware of that....the students in both sites, have a different, came in with a spectrum of different experiences and familiarity with technology."

There were real fears at the beginning that the technology could sabotage the educational program. Faculty and administrators shared these concerns, relating to both faculty and student acceptance, especially in light of the late installation of the actual equipment that would be used in Albany and Oswego.

Professor A. Dewey said, "Everything was backed up. The things that I had been promised as an instructor, that the students would all be notified that they were part of this experiment, that they would have to have this certain level of e-mail capacity. None

of that was done at all. ...first it was the money focus, then it was the implementation focus, it was very understandable...it's not atypical with this kind of...project." In addition to the preparation of faculty to teach in distance education initiatives, the preparation of students must be given full consideration. Computer skills are needed and "a general awareness [of students] of the distance learning classroom is needed for the efficient conduct of each class" (Kalke, et. al., 1997, p. 454). Delaying the start of classes for one semester may have allowed the time necessary for the preparation of students.

Professor A. Dewey also said, "[I was worried] to really see if the technology aspect was going to overcome and ruin the class, or would people get beyond that, in spite of it. Which they did, but it was a difficult thing. And the same... [thing about the professor]...learning how to be a professor with technology is disconcerting as can be, to be on camera. Two features of that: one, when [the professor is] looking across the room at a TV; the second, when you are looking across the room at a TV and the figures are about that big (...makes a motion indicating that the students looked about two inches high.) You can get no sense of facial...you get no...forget if there were glitches in the technology assuming that it was working, you still couldn't see faces."

Taking all comments into consideration, although these technology issues did arise over the past two years during the study of EASTNET, the majority of administrators and faculty agreed that they were frustrating, but not insurmountable.

7. Are there differences in organizational culture between the participating institutions? If so, have they affected the implementation of EASTNET? In what ways?

Although Albany and Oswego are both units of the State University of New York, they have different missions, different environments and different cultures. Albany is a Carnegie Research II Public Research University, and it promotes the fact that it is one of only 71 public research universities nation-wide and one of only 11 research universities within New York State. It is "committed to the discovery and expansion of knowledge particularly through the training of graduate students. The University actively assists and encourages its members to engage in scholarly and creative research and to make the results widely available" (University at Albany/SUNY, 1996, p. 3).

Albany also promotes the fact that sponsored funding in support of research has more than tripled over the past decade to over $80 million a year, supporting the research, training, and other scholarly activities of 175 faculty directors of 512 awarded projects. Albany advertises that it ranks among the nation's top 10 public universities in publications per faculty member and among the top twenty-five in citations. It is also in the top 20% for federal research and development expenditures for science and engineering, ranking 135th out of 861 U.S. academic institutions (University at Albany, 1996 p. 3).

The faculty of Educational Administration & Policy Studies work internationally and nationally, as well as locally and statewide. The Department promotes its experience relating to the essentials of administrative theory and practice and policy analysis. Its

faculty are specialists in administration and policy studies, stressing its broad perspective and how it offers unusual opportunities for research in specialized areas for the experienced educator. It has been innovative in the past and developed a Professional Administrator Option (PAO) for career administrators which allows them to take the residency over a year of full time study (University at Albany, 1996).

Oswego is a four-year comprehensive college with teaching as its primary mission. The School of Education's mission statement expresses that it "...supports and promotes extraordinary educators and learners.....and we will instruct, involve, challenge and care for all learners, children and adults..." Oswego also stresses the fact that it "...embraces a comprehensive definition of scholarship that is inclusive of the diverse creative and scholarly activities consistent with our mission of collaborating in partnerships with citizens of the world to develop, implement, and assess innovative, socially conscious educational programs for all learners" (State University of New York at Oswego, 1996). In its definition of scholarship, Oswego states "...consistent with the mission, scholarship should reflect the school's commitment to exceptional teaching, and to collaborating with the public." Oswego education faculty are scholars, "..current in their field as evidenced by reading widely, participating in professional and community associations and conferences, publishing in peer reviewed journals, and/or authoring book chapters or books. Scholars also engage in grant writing to further our understanding of topics relating to education, research in their subject matter field, research which integrates theory and practice, curriculum development that is reported in the literature, and/or pedagogical innovations." Lastly, Oswego states, "...the administration of the

School of Education is committed to acquiring and allocating adequate resources that foster growth and development of exemplary teachers as scholars" (State University of New York at Oswego, 1996).

Although the two institutions were extremely different from many perspectives, they were able to work together collaboratively. The success of the EASTNET project was due primarily to the perseverance and persistence of the administrators and faculty who participated. The energy, effort and time that each expended were the determinants of the successful provision of doctoral education to students in the Oswego area.

Dr. O. Ladd said, "We are different than the Albany faculty, in the sense that this faculty is a very field oriented faculty. We offer a Certificate of Advanced Study (CAS). We are highly regarded in central New York State. We are constantly looking for ways to serve our students better. We like teaching. We don't purport to being a Research I institution. When distance learning loomed on the horizon as a way to interact with students it was worth looking into."

Professor A. Dewey also said, "It's pretty important to emphasize, that I think there are two sets of organizational cultures between Albany and Oswego...but... [the students] initial expectations of what graduate study was to be was different than the Albany Center, so it's not a technology thing, but in comparison of distance and non-distance arrangements, I would think if you talk about difference without a technology reference at all, there would be some difference between the two sites."

Another difference between the two institutions was noticeable in the size of the two departments that were working together. Oswego had four faculty members in the

department of Educational Administration, one of whom was hired through the EASTNET grant, and Albany had approximately 14. The size of the departments impacted on the appearance of Oswego being more cohesive, when in fact it may have been that its size lent itself to this cohesiveness. Albany had many faculty who were not involved in EASTNET and who did not attend various meetings of the two faculties.

The apparent lack of support for the program was mentioned by people at Oswego, but they also indicated that the relative size of the departments may have been a factor.

Professor O. Dahl said, "some of the collaboration issues have been difficult. The biggest thing is that you are dealing with two very different institutional cultures. [Oswego consists of]... a very small, rural department and four people... Very close knit, tight, very used to working collaboratively. SUNY Albany is a much larger institution, much larger department and also maybe more of a traditionally individualistic department. There have been issues where balls have been dropped by both institutions... [and questions]...of who is responsible for what. Lack of communication, between and among everybody. But we are working it out."

The differences in these cultures came out in a number of different interviews and differences of opinions between staff at Oswego and Albany. At the beginning, there was a question of ownership of the program. Albany was concerned about the Oswego advertisements being potentially misleading.

Professor A. Lowell said, "I think the collaboration was quite good...there were issues around the ownership of the program,...and who was actually granting the

degree...Oswego is not a University Center...[and because of this] there may have been more issues to work out.'"

Dr. O. Merz said, "We had some problems last summer ['96], when we first started promoting this program. First of all, it was in the middle of the summer and no one was around. [Oswego] met with SUNY Central officials who were concerned that we weren't really moving on the promotional piece and it was almost...[the end of the summer and]... September was going to roll around and we weren't going to have any students because we hadn't made an effort to go and find them. That was a really awkward and confusing time. Albany wasn't sure if it was their responsibility to do it and... they were going through some very difficult times with people leaving and going on vacation and what-not. [People at Oswego]...weren't sure what they were supposed to. [Oswego]...published a flyer and sent it around to several hundred schools in several counties in central New York saying this program was going to be available in the beginning of the fall. And the folks in Albany thought that the way it was written...suggested that...[Oswego was]... offering the program equally. Which [Oswego] can not do...[can not]...offer the Ph. D."

Dr. A. Maynard said, "Basically, in terms of Educational Administration, ... it is a collaborative program but the degree is from SUNY Albany. ...[the students]...have to meet SUNY Albany's criteria for admission into the doctoral program. Applications would be reviewed by both the Oswego faculty and the faculty at SUNY Albany."

Professor A. Fall said, "the collaboration has been reasonably good. The biggest problem has been the distance involved and getting the two faculties together. We'll have

our faculty meeting here. Oswego has their reasons for doing this and Albany has their reasons for doing this and quite often the reasons don't inter-mesh exactly. So there have been some turf fights and little political fights, some economic battles, but I think most of them have been resolved. The biggest problem was figuring out what the language of this was. Whose doctoral program is it? What is the title of it? Can Oswego say that they have a doctoral program? The bottom line is, following University regulation, it is the doctoral program at SUNY Albany offered in cooperation with Oswego."

Documents show that, in fact, Albany did have the ability to revise the flier in question in May 1996, and did make some revisions. Evidently, people at Albany, perhaps the provost and System Administration staff, were not satisfied that enough revisions were made and additional revisions were made to this flier in August 1996. It also appears that the actual name of the collaborative doctoral program had not been formally decided upon in the early stages of discussion. Had this been done, there is the possibility that this misunderstanding might not have developed.

Oswego often thought that Albany was rigid with its requirements regarding entrance requirements and the residency requirement taking place mostly in Albany. (Six credits can be taken in Oswego; 18 credits must be taken in Albany over two summers.) Albany staff stated that they had already been extremely flexible and innovative. An Albany administrator addressed the entrance requirements and their relevance to the University's accreditation and the difference between a research university and a comprehensive college. Albany believed that it could not make any more changes to the residency requirement because it could risk its accreditation.

Dr. O. Merz said, "There are some really interesting program challenges there. I've had a lot of occasion to interact with the people at this end...[students]...have an interest in taking those courses. The first thing they say is, 'what do you mean I have to do a residency in Albany? And go up there in the summer time. Why can't they come over here so I can go home at night, instead of having to leave my family?' I don't know what the answer is to that. I just know it is going to be a challenge for Albany to try to deal with, because a lot of colleges who do offer Ph. D.s in this electronic environment, have opted to change that and get out of the residency altogether. Replace it with another kind of requirement that accomplishes the same thing approximately. You are precluding a lot of professional people from doing something they would like to do."

A faculty member at Albany said, "Let me talk about another problem. Both faculties have expectations of this that are unrealistic. And there are problems with the project that we would expect Oswego faculty to solve but their hands are constrained there. And I'm sure there are things that they expect us to do that we either traditionally haven't done, or we are just not physically able, financially or politically able to do. In other words, they are assuming that we can make changes in this program, and they are changes that are in the agreement or we have a vice-president saying no, you can't do it that way. Let me be specific regarding the summer program meeting the residency requirement. The University states that you have to have one year, two semesters of full-time graduate study in any doctoral program. Traditionally what that means is fall/spring, all semester doing this activity full-time. For the Oswego program we are doing the residency in two consecutive summers of four weeks each--two weeks on, two weeks off.

two weeks on. Now from our end, we have the residency requirement, there is no way of getting around it. We can't waive it; it's a University regulation. When we registered our program with SUNY Central that's what we said we were going to do and that's what they expect that we are going to do. We have to do it. We have gone as far as we can in being flexible. We can't modify the residency requirement any more and expect to maintain program integrity."

Oswego has dealt with extreme geographic conditions from its opening and faculty are used to "going to where the students are." Albany, being located in the Capital of New York State, has not had that experience. This may be part of the reason that Oswego has taken an extremely proactive stance in regard to distance education.

Dr. O. Taft said, "Oswego wants to take a leadership role in distance education in SUNY. EASTNET and WESTNET are really misnomers. SUNY provosts have agreed that distance learning can't have geographical boundaries. Unfortunate that these names were chosen in the beginning. It was the baby steps that we were making. These names are inherently wrong."

Dr. O. Merz said, "That results from the fact that EASTNET gave us a mission which was to bring the doctoral program in and gave us the equipment. We've been trying to exploit that. Not just for EASTNET...our promise to EASTNET is, 'the hours you want to deliver your courses are yours. You're first come on the system. But when you are not using it, we are going to use it for other things.' It is an extension of EASTNET. We are using that equipment, when not using it for EASTNET, we are using it for other things. Our plan is to continue to do that."

A faculty member at Albany said, "I am not exactly sure what the limits of the technology are. A big advantage that Oswego has over Albany, is we have...[a position]... and part of its responsibilities is distance learning, but this staff member has to run all of the Education Communications Center (ECC) and the television studio and radio studio and all of the other facilities. Where ...at Oswego...[there is a person for whom]...distance learning is the sole responsibility. Pretty much, they are much more savvy than we are."

8. Are there barriers to the sustainability and continued enhancement of EASTNET? If so, what are these barriers? How might they be overcome?

There are a number of barriers that could have a major impact on the sustainability of EASTNET. The two that are mentioned most often throughout the interview process are financial resources and the recruitment and enrollment of qualified students. This is not surprising since in the SUNY system funding of campuses is tied to enrollment.

Enrollment, especially in the first semester, was very poor. Although large numbers of students had been projected to enroll in the doctoral program, the original class consisted of only four students at the Oswego end. Subsequent semesters increased in enrollment to between 12 and 14, which is not high but should still be sufficient to operate a doctoral program via distance education. A number of faculty members mentioned that the pool of students who had met all of the requirements for the doctoral program was very small and that it was important to maintain the academic quality of the

cohorts, especially since there are additional challenges that often accompany a distance education degree program.

Professor A. Darrow said, " Challenges, I see two challenges....one is to get enough qualified students from Oswego, to make it worthwhile. It was much too slow an appreciation on...[Oswego's]...part that GREs are part of the requirement. We had very few applications with GREs. Also, my impression is that EASTNET money is limited in time, that it isn't at all clear what happens after that, that there is an expense and that certainly the department is not going to...[cover]. So there are some statements from the dean's office that they'll handle the expense, but I don't know what that means in concrete terms. So there is always the fear that you can have innovative projects that are funded in the beginning, and well, the funding is not there anymore and you can't handle it. So that is really the big question that could disable everything else. The first one is more clear cut, about not being enough good students, to make it worthwhile."

Professor A. Dewey said, "There were two or three students [who were] anguished by the mismatch of learning styles....the concept that each link leads to other links and add to that you have to do your own research. It blew them right out of the water. And I said, 'You see, this is closer to graduate education. Fortunately it was a good group of bright students, but their initial expectations of what graduate study was to be was different than the Albany Center. It's not a technology thing, but in comparison of distance and non-distance arrangements, I think if you talk about difference without a technology reference at all, there would be some difference between the two sites."

Administrators were also extremely concerned about the small enrollment and how it would impact on the future of EASTNET. Dr. A. Maynard said, "...how successful are we in recruiting? How many bodies do we have going through the system? One of the major rationales for having something like this is there is an unmet need in the center of the state."

Dr. S. Cady said, "The overall challenge is always enrollment. Will you get enrollment? Another challenge is how do we optimize the student/faculty interaction and student/student interaction. We know that it is important in all learning environments. The challenges are pretty basic, probably similar to traditional delivery programs. Can we get enrollment and will people have a good experience and want to come back?"

Dr. A. Cates said, "I see one main challenge and that is student participation. If the demand is there, the technology will get better and better and better, but only as long as the demand is there. The use of the equipment is great, even for different things. We just did a doctoral dissertation hearing for a person who didn't have to come up here."

Professor A. Fall said, "The main one is getting the students!!! If we don't have the students, then it's not economically feasible. Can we do this? We have literally contacted hundreds of students to get involved in this. But for a variety of reasons...[we still have had small enrollment.] One thing is the distance learning technology and we still have this University residency requirement. We hadn't really considered that. Now we are having the students meet the residency requirement by coming in for summer session for 4 weeks. We had compressed it and that was a big problem."

Professor A. Panz said, "The biggest problem we have had with distance learning has been the shortage of students from Oswego, not any relations with institutions. We have had a few technical problems, but they have not been big problems. There were other things, for example...Oswego said, '...we have many, many students that want to do a program like this. It will be cost-effective for you.' When we were thinking about driving out and delivering the courses, we were not going to do it unless we had twenty students. We would send a faculty member out to teach two courses if we had twenty students. Then it turns out that Oswego has only four students."

The second major barrier was the funding. EASTNET was funded for two years, which only included one year of instruction. The obligation to the first cohort of students had to minimally be for three years of instruction to give them time to finish all course work before they went into independent study for the comprehensive examinations and dissertation. Almost every informant mentioned the fear of not having the necessary financial resources to make good on the obligation to the first cohort. A number of administrators and faculty mentioned the history of higher education in starting a project and then not having the resources to carry it through properly.

Professor A. Lowell said, "One challenge is ongoing...budget support, and how it should be met. Clearly there needs to be some blend of campus commitment and continuous seeking of outside support, both from SUNY Central and from foundations. A second issue is that we still continue to have struggles in reliable equipment performance ...and without the technical expertise...and being that they always want to economize... that is a real resource issue."

Professor A. Lowell also said, "We are going to have a big crisis when it gets to be time to upgrade the equipment. [The major problem is]...the resource allocation including, not just ongoing operations, the very significant and the huge challenge will be the equipment upgrade when needed. I don't see how the campus can do that. It will have to come through external funding. So it is an infrastructure issue in addition to the program implementation resources that are needed."

Professor A. Raab said, "MONEY!! As I mentioned earlier, what I am discovering is that we are in a particularly awkward situation in a SUNY school at this point...[in 1998.] Being in a state where public education, and higher education, in particular, is now suspect, we don't have the funding that is really needed to continue this. The question for the University is...does the University want to continue funding it? I can't answer that question. Elsewhere that I have seen it, they have gone one of two routes. They have to have a major commitment from the state government to do that, because of the belief that public education should reach everyone, or they sought outside funding through a grant...for example, the Kellogg Foundation is supporting a number of distance learning programs."

Similarly, administrators voiced concerns regarding sufficient funding for the continuation of EASTNET. Dr. S. Cady said, "...money [was given] to set up the technology. But as with any project, you have to look at the sustainability after you get past the initial investment. It always comes back to enrollment. What are the ongoing costs of doing instruction using that method? Will we find that it's successful educationally and we can do it at an affordable cost?"

Another major barrier to the sustainability of EASTNET that was brought up time after time, was faculty support. Any instructional activity undertaken by institutions of postsecondary education must have substantial support from the institution's faculty. It is unclear as to how supportive the faculty are of EASTNET. There is a core of faculty who have been extremely committed to the project, a group who are mildly supportive and a few who are uninterested. A number of the faculty at both Albany and Oswego who were "pioneers" in this distance education initiative have left SUNY and it will be imperative for supporters and "cheerleaders" to take their places if EASTNET is to continue to be successful at serving the needs of doctoral students located geographically distant from Albany.

When asked about the potential for EASTNET's continuation, referring to the change that was happening at both Albany and Oswego, Dr. A. Jago said, "As the cast of characters change, you must bring them up to speed. There needs to be passion to move it...commitment." Other faculty members concurred. Professor Monti said, "The size of the population and the willingness of the people to continue working in it...both teachers and students. Some students may feel they are getting cheated by only seeing the teacher remotely. Some instructors would feel frustrated to see the students only remotely. I guess temperament and personality have a lot to do with it. Some people are more adaptable to changes such as this, than others. We have to be very successful in the beginning. We have to be very persuasive about EASTNET. The real challenge is to persuade people who are interested in it, or who ought to be interested, that it's a much more effective way, as efficient a way to engage in a teaching enterprise, as the

conventional way. We've got to show that. It could be an intimidating activity, so you have to be persuasive enough that you don't threaten people and institutions who are more accustomed to doing things in more conventional ways. You've got to show that flexibility is allowed for the older and the newer methods. Many more people at both ends have to get involved."

Dr. O. Merz said, "I'm not convinced that the faculty, either Albany or Oswego, have fully resolved to make this thing successful. I think it is going to require a very, very significant commitment on the part of both faculties to work together. I also understand that there are some faculty who don't like the idea at all. To be frank about it, there are a lot of people who are interested who feel that it is absolutely imperative that this thing succeed, not because necessarily they want it to, but because we aren't going to be around if it doesn't. Sometimes those are good emotions or thoughts or attitudes for people to have because they do push the thing forward. Ultimately the success or failure is that there will not be any courses if the faculty doesn't buy in. There will be no success if the faculty doesn't do its job. They are the main interface with the students. And it can't be dropped on to the technical people. Faculty are the main interface."

Related to the concern about faculty support for distance education, is the critical issue of incentives for faculty that appears throughout the distance education literature. It seems that the main incentive that was given to participate in EASTNET was release time and perhaps development stipends, but these were only given in the first implementation year, before the grant ended. Release time is no longer given to faculty members who teach in the program although they are expected to teach in the EASTNET program if

their courses are part of the doctoral core. To be successful, distance education courses must be transformed from traditional courses and methods. You can't just put a "canned" course over the telephone lines. There appears to be resistance from faculty who do not feel recognized for the contributions they are making to the University or may feel that the University has not put enough resources, e.g. sophisticated equipment, into it.

The Department of Educational Administration and Policy Studies at Albany proposed, and the administration approved, release time for those professors teaching courses via distance education in the first semesters of the EASTNET project. These faculty were released from one course thereby giving them credit for teaching the class section that was at the remote site in Oswego. Professor A. Panz said, "One of the things we did for the instructors who taught the distance learning courses, because they taught it both at Oswego and here, is that they both only taught one course that semester. Those are hidden costs. I'm sure they did as much work, teaching that one course, as they would have done teaching another course."

Concern was expressed a number of times about possible premature evaluation of EASTNET. Distance education requires a shift for the institution, the administration, the faculty and the students. There is a learning curve associated with any type of change, and in higher education this can be a long process. Administrators and faculty discussed the fact that EASTNET should be given ample time to prove itself; to prove that distance education can be viable in doctoral education.

Professor O. Dahl said, "I think the biggest challenge is the old program evaluation problem. (Joel Barker calls it the paradigm shift problem.) We are going to

evaluate this program very quickly. Even now it's already been evaluated: without having a certain number of students it can't go. You are looking for success, traditional indicators of success, and you are looking for data to fit into your old traditional model. How many FTEs or whatever you want to say. We are going to evaluate the new paradigm according to the standards of the old paradigm. It may not be a valid evaluation. We see a tremendous potential out there. But like anything, you have a tremendous learning curve, tremendous start-up difficulties, and piloting problems. I think both institutions have taken a step on faith, and said, 'we are going to support this regardless of early returns.' I see the biggest problem, if money gets tight or political winds change, this is a program that if not well supported, could be swept away pretty quickly. Too bad, because with all the groundwork that has gone in here, enrollment is not as big as we had hoped. It may be premature evaluation or premature summmative evaluation and determine that the program is not working..."

Premature evaluation was also a concern of administrators. Dr. A. Maynard said, "So there's another concern...are people willing to sign on for the long haul...both in terms of waiting to see results and giving it a chance? And are you willing to continue to allocate the resources to do it right?"

Dr. O. Merz said, "...funding. I think there is a lot of pressure to make it succeed in the short run. I think that's unfortunate because only higher education would think that something like this would 'turn on a dime' for them."

Technology was mentioned by relatively few informants as a barrier to the sustainability of EASTNET. It is a concern, but does not threaten the project. Most

faculty felt that although there was lots of room for improvement, if enrollment was achieved and faculty support was garnered, the resources would be there to achieve the enhanced technical requirements.

Professor O. Ladd said, "I am assuming that it is all going to get worked out. That just like anything else, for example, you should never buy the first car the first year it is designed. That's what our problem is right now. The second year, I figure they will have it all worked out."

Dr. A. Cates said, "I see one main challenge and that is student participation. If the demand is there. The technology will get better and better and better as long as the demand is there for it."

Professor A. Fall said, "I think this is an outdated technology already. I think that the electronic learning network at SUNY Central (the SUNY Learning Network) is a much more viable technology, for doing courses totally on-line. [We ought] not to [totally] rely on the PictureTel technology, because there are so many constraints put on it. You've got to have the facility, the right time, the air time. You've got to have the equipment working. With the totally on-line courses you don't have to have any of that. As for the technology, you really have the technology, you've got those little cameras ...you can have face-to-face interaction with your students now."

One faculty member felt that the technology was a huge barrier to the sustainability of the program. Professor A. Gill said, "I would not do it again under the circumstances that now exist. With the equipment we have and the bridging that has to take place, I think that there are better alternatives. For example, similar to the

Professional Administrator Option, we could have them come down on Saturdays. Or have...[faculty] go out there and teach."

Another area that cannot be dismissed is that of policy and support from "the top." EASTNET had the support of top administration at both institutions to get it off the ground in 1996 and it is critical that it maintain that support in order for it to be sustained. EASTNET was meant to be a "pilot" program: to be a model program for the rest of the SUNY system. Some of the problems that have been discovered during the first two years of this distance education initiative have to do with policy and these changes that are necessary can only be made at the top of the individual institutions and/or through SUNY System Administration.

Professor O. Dahl said, "If all of a sudden a new president comes in and says, 'This is not a direction we want to go in.', than support will dry up very quickly. So that's an issue. People have made a commitment to support this, but that's a commitment on faith. The question is what can we do to make it come through...for example..what if we lose support from the top? Through forward thinking....it is a question of faith right now, because the enrollment numbers out there don't support it."

Dr. O. Taft said, "We must create mutually beneficial partnerships with other institutions like Albany. We must be able to market outside of EASTNET's boundaries, because that is an artificial word in distance education. We need an enriched base from which to operate with others in a collegial way. It will be a challenge: Who gets the credit? the cash? Who gives the degree? All of these must be resolved. They are challenging enough within the System. All levels have to work on the agreement for it to

work. It is a challenge to augment our programs, not cannibalize programs. Hopefully this program is the first of several collaborative efforts."

Dr. O. Merz said, "Now let's just go forward and not worry about some of these... [smaller]...issues. Another issue is...we should somehow work out through policy and arrangement that we are not into this ridiculous FTE arrangement that we have. That's a big issue that has not been resolved...ultimately it comes down to who gets the FTE for a course that is offered."

9. What lessons has the implementation of EASTNET presented to decision makers about planning and evaluation?

EASTNET was an opportunity that was like a "gold ring" on a merry-go-round, that needed to be grabbed as you went by, or it would be missed. Because of the fleeting nature of many funds that are made available through SUNY System Administration, Albany and Oswego decided to "go for the gold" and take advantage of a financial windfall that was only available temporarily.

The speed at which EASTNET developed caused some faculty to feel a lack of appropriate consultation, which may have hampered initial support for the initiative. Faculty should probably have been kept more informed, although, in relationship to the collaborative doctoral program between Albany and Oswego, EASTNET primarily changed the mode of instruction that would be used in a previously approved program.

Professor A. Darrow said, "I think the biggest problem as I can see it as we talked a lot here. There was a grant out there, so the administration here obviously gets all hot

for this grant. And everyone is enthusiastic because there's money to be had in them there hills. And it's NOW. So you have to jump on it and immediately start a planning process that's needed for an academic organization. And I think that some of this happened because it was in a hurry. Some other part of it due to the limit on deadline ...and some of that had to do with the grant developing late, and being structured so that you had to do it in this time and it couldn't be a year from now."

Professor O. Dahl said, "I believe in planning and but I don't believe we live in a rational world. My whole theory of administration is that we live in a complex world, an irrational world...the "garbage can" theory of decision making. When you live in a world like that, you live with Murphy's laws and people did plan as much as they could foresee. As you are going into unknown territory, lots of things pop up that no one could foresee, and you don't see them until you are through. In one sense, we were fortunate not to have large numbers in the pilot program because it was a difficult time. Larger numbers may have made it even more difficult. You learn as you go. You adjust and I think people did...from what I see everything is fine."

Professor A. Dewey said, "If you tie it to the literature, certainly, "muddling" is the description of the process....remember Selznick, the concept of "Co-opting".... co-opting in the sense that I do really believe that someone at SUNY Central and at the campus had a good idea of what this thing was going to shape out to be...thinking out the idea of linking SUNY campuses, getting committed to distance education. I think they probably thought that the money that was dropped down was probably adequate to sweeten the original pot to get it going. But a lot of what Selznick talks about, the critical

feeling about that you are all part of a larger agenda like the grass roots--being co-opted in; that has not been done. Other things preoccupied the minds of people at the grass roots. That is, there was a concern with the basic fact of faculty not having a pay raise for three years. There didn't seem to be an incentive or disincentive...[for faculty]... to be involved or not involved."

Regarding the adequacy of the planning and implementation process, Dr. A. Fall said, "Fair to poor on all of them. First of all, planning. The planning was done very poorly. Nobody thought through this process, primarily because they hadn't had any experience in it. There was a delay in just getting the EASTNET grant approved. And therefore,...[they were]...late in ordering the equipment. The equipment wasn't on site when we needed it. The entire class started out late and off on a bad foot. That was part of the problem. The instructors were thrown off of their normal scheduling and planning of their courses. Teaching...[in Albany]...was going well, but the courses and people in Oswego were about two to three weeks behind. And so when they struggled to get those people up to speed during the class time, they did it and it was detrimental to the people [in Albany.] That was a problem. So planning was poor. The equipment, like any brand new equipment, had setup problems and operating problems initially."

Teaching is different in distance education. It is still true that a good teacher is a good teacher no matter what modality is being used, but technology demands modifying courses. This does not just mean training a faculty member to stand in front of a camera. The role of faculty changes from being "a sage on the stage" (even if they are on television!) to a "guide on the side." (Stinehart, 1998, p. 3) Technology can enhance

conventional instruction, but faculty must have the training and resources to facilitate this enhancement. This takes time. It appears that more time and education in this new mode would have helped the faculty and the students to prepare for the courses taught through EASTNET.

Dr. A. Cates said, "The instructors have to understand distance learning and they have to want to do it. You can't be forced to do distance learning. Their classes and their presentations have to be made for television. Any type of visuals have to be done so the distance students can see them, and have just as much access to them, as if they were here, even if it means sending...[information] to them ahead of time, so that somebody gives it to them at the same time as the local students get the information."

Professor A. Darrow said, "I didn't feel anxiety about teaching. I felt prepared enough. And I'm saying that as someone who is not keen to technology. Technology doesn't agree with me a lot of time, but by that time I had read some...[literature]... and gone to a couple of sessions, and gotten answers that really reassured me. I thought the training was at least adequate."

Professor A. Dewey said, "It was my understanding that all of the logistical aspects, particularly the idea that the students on both ends were notified early, at least by mid-summer, and have all of their capacities, (e-mail capacity specifically and the graphic access, Web access), already done when they walked in the door...and the big shock for everyone, was that the students in Albany were not told that there would be any technology used. They were expecting just a normal class."

Professor A. Raab said, "There are still pedagogical issues, but after talking to people who have been doing it for much longer than I, I am very confident that they can be solved. We haven't solved them all yet, but they can be solved. And if somebody else were doing this, all I can say is that they should find out more about it, before they get into it. It would make it a lot easier if you knew what you were doing."

Dr. S. Cady said, "I'm sure we haven't solved a whole lot of faculty-related issues: whether to get involved in distance learning, and the additional training in new technologies, where that fits in the promotion and tenure process, if that's valued and how is it valued in getting involved in traditional scholarship and other activities. To be sure we haven't solved that. We have issues of who owns...intellectual property issues, we are trying to work through, like everybody across the country. I would say we haven't solved it. Other issues for faculty, on the video, and it's an intellectual property issue: 'who owns this, this is me, now that they have the tape of my course, they don't need me.' Other kinds of issues out there that are concerns of faculty and to the union."

The fast turn-around time also caused a problem with a smooth implementation of the new program. Distance education demands changes not just in instructional activity, but in student services activity as well. Logistics were difficult in a number of areas. The implementation may have been easier if some policies had been reviewed and modified earlier on, rather than later on.

Professor A. Raab said, "They...at the University level, tried to cooperate... certainly SUNY Central is interested in trying to get the cooperation between the two campuses, to do things so that the students could actually physically manage to get to

class, pay their fees. It was the biggest nightmare I ever had to be involved with...just absolutely horrendous...and this was with all of the "good will" of everybody involved. We had one meeting with 13 of the top administrators of Binghamton and Albany using tele-conferencing to try to resolve the tuition problems of seven students. SUNY schools are not on the same semester schedule, they don't use the same number of credits, they don't begin and end at the same time. So the first question is, 'When do you hold classes?' You don't usually have the same time links. You don't start classes at the same hour. Those were relatively easy to work out. Other things, such as...what we have to have is agreements between the campuses on health services, student fees which includes parking, athletic facilities, and all of those other things. Tuition...who gets the FTE? For what? How do we split tuition? We are still trying to negotiate that. It turns out that financial aid is a nightmare. They are trying to work out all of that with everybody agreeing to cooperate, but the computer systems are set up such that, you are either full-time or not. Each...[registration]...has to be processed by hand. You have to try to predict which computer system is going to kick in so you can stop it from kicking in. At one point...[students]...were sent a bill by each university. They had to pay the bill, and then they would be reimbursed...but that is the nightmare that nobody ever talks about. There is a lot of interest in how we are handling it, because we may be setting precedents for the rest of the state. This is an incredible system, made worse by computerization."

EASTNET has a formative evaluation mechanism system of quarterly reports to SUNY System Administration. These reports are compiled by the campus liaison and are comprised of the results of how campuses met scheduling deadlines and completed goals

that had been set in the original proposals. A summative evaluation was also required at the end of the grant.

In addition to these reports, faculty members and students completed evaluations of the courses at the end of each course. These formal evaluations have not been reviewed by the researcher, but the following comments were received from key informants during the interview process.

Professor A. Lowell said, " ...we have several evaluations going on...internally, we very carefully obtain student and instructor evaluations and monitor performance. The evaluation really has been program based. I do feel evaluation is in place. Of course, we are doing regular course evaluations for instructional improvement purposes as well."

Dr. O. Merz said, "We asked the students who are involved to provide us with some feedback. Some was positive, some was negative and my sense is, that until we have done this for a little while, and people are really comfortable with it, used to it, that it's hard to say how effective or ineffective this program is going to be. But, all of that said....some of that is just growing pains. Some of it is just, we hadn't anticipated certain kinds of issues that would surface. We hadn't really talked about marketing and who does it, who pays for it, and how it's done. We hadn't really talked about who's going to be teaching in this program and who isn't. We sort of talked about that conceptually, but we hadn't nailed it all down. We hadn't really thought about how we are going to support the students who come into the cohort ...at [the remote] end, electronically. How were we going to get them their library materials? How were we going to make sure that

they get their homework back and forth? I think some of it came together and some of it still needs to be resolved. But generally speaking, it's a great idea from the feedback I get from people who hear about it and have a curiosity about it. We need to do what we need to do to make sure it works..."

Dr. S. Cady said, "...A programmatic and a technical evaluation...[are included. In the]...programmatic, I would include the enrollment piece, the course content, the faculty participation. [Questions such as,] ' How much did it take to bring off the project?' The technical evaluation would include: 'Did the technology that we chose end up being effective? Was the technology cost effective? Was it easy to use?' To give you an example, the technology that Albany has acquired can connect to Oswego but they can also connect to anybody else that has it, too. If Albany is thinking more broadly about using that technology, I think from... [SUNY's]...perspective, evaluation will be looking at issues of the project directors and of its replicability to other campuses, in terms of dissemination of the results. It presents a model also for other campuses within SUNY."

Part of the evaluation of EASTNET must include spinoffs that were occurring in May 1998 or may happen in the future. From the beginning, EASTNET was defined as a pilot project with a stated goal of replicability to other programs and institutions. It appears that there have been some new projects started in the SUNY system, even at Oswego and Albany, that are building on the EASTNET project.

Dr. A. Maynard said, "The residency requirement was changed. The University also had to make a decision and say, 'OK, certain fees don't apply.' It doesn't make a lot of sense for us to charge a parking fee when they are [not on campus.] It doesn't make

any sense to charge a technology fee when they are not using our equipment. [The same with]...the health fee. There were definitely policy decisions that were made in the institution to deal with some of the issues involving distance learning. And they have now become kind of the precedents for other things. For example, the ETAP program is going to be starting in the fall as part of the SUNY Learning Network. Students will be able to get a Master's in Curriculum and Instructional Technology via the Web."

Dr. A. Maynard said, (regarding getting policy changed) "...it wasn't automatic. It was mostly a question of alerting people to the fact that we can expect this...we can't charge them a fee if they are not using the services, of bringing it to light, because since this is so new, no one had ever dealt with it. The vice-president for business and finance had never come across this before. To some extent we were breaking new territory. Now that it has happened, and more and more departments get into this in one form or another, it is not much of a surprise to the administration. The system is still not as flexible as we'd like it to be. There's more flexibility than there used to be. For sure."

Dr. O. Merz said, "It's interesting the way distance learning is evolving in SUNY. It's so new to so many people, we find ourselves wearing lots of hats. "...the distance learning advisory panel for SUNY...[has]...discussed everything from program to copyright to technology to State Education policy to Carnegie units. It has to be because it's all interrelated."

Analysis by Theory of Diffusion

The study of EASTNET presents an interesting view into the innovation process. Diffusion of any innovation requires communication in order for potential

adopters to share information. Communication and sharing of information reduces the uncertainty and lack of predictability that are associated with an innovation. This *innovation-evaluation information* can reduce the uncertainty about an innovation's expected consequences.

Information to be shared, according to Rogers, includes both components of technology: hardware, the material object; and software, the knowledge base for the physical object (Rogers, 1983, p. 35).

Because the answers received to questions regarding communication with important stakeholders varied, the researcher concluded that the initial communication regarding this innovation was inadequate. There were many reasons for this inadequate communication which included: short turn-around time for the grant application, administrators and faculty wearing many hats with many different responsibilities, timing of grant approval, and faculty who did not choose to attend scheduled training. Whatever the reason or combination of reasons, it appears that communication was not as complete as it should have been.

Diffusion has been defined as the process by which an innovation is communicated through certain channels over time among members of a social system (Rogers, 1983). Faculty needed information not only about the PictureTel equipment, but about also pedagogy and changes to be expected as a result of implementing a distance education initiative. Pedagogy was discussed in some meetings and during the training that was held in June and August 1996, there is no evidence that faculty members were encouraged or had time to attend conferences and professional association meetings

where they could have dialogued more about the important areas of change in teaching, learning, support, services and the student etc., before the beginning of the initial semester.

The innovation process of EASTNET followed all of the five stages that Rogers outlined, but in a very short time frame. Stages included:

1. the knowledge stage, when administrators first became aware of distance education;

2. the persuasion stage, when the Office of Educational Technology (OET) released the original *Request for Proposal* in solicitation of distance education projects, occurring on the heels of the original discussions between Albany and Oswego regarding faculty driving to Oswego to teach a cohort of doctoral students;

3. the decision stage, in which technical experts choose the technology to be used with undetermined amounts of consultation of the faculty;

4. the implementation stage, which lasted two years, but had only months of discussions and consultation to facilitate planning by the faculty and with the equipment being delivered to Albany and Oswego only a week before the first classes began; and

5. the confirmation stage, at the end of the study in May 1998, the administrators and faculty were deciding whether to continue or discontinue the use of distance education.

Although all innovations must go through each stage, there are varying rates of adoption by potential adopters. EASTNET was no different. The main elements of diffusion that affect the rate of adoption include the attributes of the innovation, the

nature of the social system, the type of innovation decision, and the extent of change agent efforts. Primary attributes of innovations are: relative advantage, compatibility, complexity, trialability, and observability. The use of PictureTel, or compressed video, scores positively on complexity, being relatively easy to master the technology and pedagogical changes. It rates moderately positively on trialability and observability as the equipment can usually be used on a trial basis and can be somewhat visible to others. In the case of EASTNET trialability and observability were reduced because the project was implemented so rapidly and the faculty did not have sufficient time to "try out" the equipment.

Compressed video, however, rates somewhat negatively on relative advantage, as most faculty members agree that, although it is not less effective, it is not more effective in educational outcomes, than traditional methods of teaching. It also rates somewhat negatively on compatibility, as distance education may not be consistent with the teaching philosophy of many faculty members.

The second variable impacting the rate of adoption is the type of innovation-decision. EASTNET was clearly not an optional decision, which is made by individuals. Although there was some consensus on the project and the initial courses were taught by "volunteers" making individual participation optional, the actual decision was an authority decision, made by top administrators and technical experts.

The third variable is the communication channel. EASTNET utilized the interpersonal mode, primarily. Each department and school had a few advocates of distance education and they spread the word with face-to-face communication.

The nature of the social system, including the norms and amount of interconnectedness, is the fourth variable. Institutions of higher education are made up of individuals and departments who are extremely autonomous in nature, making it difficult to be very connected which facilitates adoption of an innovation such as distance education. This may have had an impact on the acceptance of distance education at the University at Albany which places a high priority on research and where many professors are deeply committed and involved in research projects, both on and off campus.

The fifth variable impacting the rate of adoption of EASTNET is the degree of effort of change agents. This was more noticeable at the beginning of the project as, especially at the University at Albany, those responsible for distance education wear many hats and have many responsibilities. Efforts of change agents in May 1998, still left unanswered questions in the minds of implementors and "would be implementors" regarding the continuation of funding for distance education.

Diffusion effect refers to the ability of the social system to generate pressure on members. EASTNET has received quite a bit of support from members of the Department of Educational Administration & Policy Studies at Albany. Those who usually teach the core courses have been teaching in the distance environment even though they may not have volunteered. Also, the residency requirement was changed to accommodate the Oswego cohort. It was being fulfilled in two consecutive summers with alternative scheduling. Another indicator of increased support is that during the first summer (1997) the cohort of students was offered no choice and had to take the two courses that were scheduled, but for the second summer schedule (1998) students have

the choice of two courses out of eight or nine. That is as good, or better, a selection as any traditional, on-campus student typically receives in the doctoral program.

The degree of innovativeness possessed by an individual or other adopting unit in a social system also affects the rate of adoption. The Department of Educational Administration & Policy Studies at Albany and the Department of Educational Administration at Oswego are two of the first departments at these two institutions to offer programs through distance education modes. Being among the first to offer courses through distance education, should characterize each department as a whole as innovators or venturesome. Because distance education across higher education generally is still considered innovative, (although it has been in existence for many years), it is difficult to characterize individual faculty members who became involved with EASTNET according to Rogers' taxonomy.

It is apparent that the original faculty members who taught via PictureTel during the first semester were innovators. Both volunteered, and at least one stated that there was a personal interest in the technology and the communication capability of the new modes that caused him to volunteer. Neither of the first two faculty members were considered by their colleagues as "technocrats" or to be the most up-to-date with technology of the department's members. Both relayed positive experiences and both agreed to teach a second time in the distance education mode. Based on their initial experiences, other faculty in the department, only a few of whom had a personal interest in distance education, agreed to teach via PictureTel or in the alternative residency program during the summer sessions.

The influence of these original faculty members may have resulted from the nature of the social system of these academic departments. Rogers states that communication is more effective and rewarding when the sender and the receiver are the same or similar. If they share common meanings, beliefs, social status, education and language they are considered to be homophilous. While it is not known if the faculty in these departments share beliefs, they do share common meanings, social status, education and language, which would aid in the communication. The departments are also open to the environment through their work with public school districts in the state.

Diffusion systems are usually characterized as centralized or decentralized, but they can also be a combination of centralized and decentralized as well. EASTNET fits the combination model of centralized/decentralized. In the early stages of the development of the proposal and negotiations with the other institutions, the centralized model was enacted. This was necessary because the "big picture" of the institutional social system had to be taken into account and there was a need for technical expertise to implement this highly technical innovation across units of the State University of New York.

As the implementation stage began, the decentralized model was appropriate because the users are highly educated and the PictureTel equipment does not require much technical knowledge. The decentralized diffusion system allows the needs and problems of the users to match the solutions more closely. Many decisions were left to each programmatic area, especially curricular matters, whether developing new or

modifying existing curriculum, and how to utilize the funds that were budgeted to each program.

The innovation process in organizations has five stages, separated at the decision to adopt point, into two types: initiation or implementation. In the initiation stage, which includes agenda-setting and matching, EASTNET came about because of the recognition by the Educational Administration departments at Albany and Oswego of the need to expand Albany's doctoral program to central New York. This became the agenda. As the two departments were looking for ways to serve this population and increase access to the University, they were invited by their deans to write a proposal to SUNY System Administration in response to OET's *Request for Proposal*. March's "Garbage Can Model" of problem solving and innovation suggests that problem solving is not organized and linear, but more complex and unstructured due to the shifting combination of problems, potential solutions, people and opportunities. EASTNET seems to fit March's suggestion that innovation, "...often seems to be driven less by problems than by solutions" (As cited in Rogers, 1983, p. 362). Funding through OET seemed to be compatible with the original effort to offer the doctoral education through a collaboration between Albany and Oswego. EASTNET matched the problem which was necessary for the initiation stage of the innovation process.

After the decision to adopt distance education came the implementation stage with the first step of redefining/restructuring. Reductions in faculty workload during the first semester of teaching via distance education and the modification of the residency requirement occurred during this step. The clarifying step is the phase in which the

Oswego cohort became more a part of the Albany program as classes started and students came to Albany for the summer session. This phase was continuing at the end of this study in May 1998, and EASTNET was in full implementation. Routinizing is the final phase in which the innovation loses its separate identity and becomes part of the organization's routine activities. Although the Oswego cohort has now been taught by every faculty member who teaches a core course and students have access to more courses in this second summer session, it is still not considered part of Albany's routine instructional activities. The apparent cause of this non-routinization is that administrators and faculty are suspect of the continued funding and support of the EASTNET project and decided to adopt a "wait and see" attitude.

Innovation and its diffusion are but the means to the end of the consequences that result. Desirable, direct and anticipated consequences usually occur simultaneously, as do undesirable, indirect and unanticipated. It appears that there have been mostly desirable, direct and anticipated consequences through May 1998. Since at the time of this writing the first cohort had not yet finished the doctoral courses, comprehensive examinations and dissertation it was too early to discuss the consequences in depth.

The introduction of EASTNET and its accompanying innovation has not been seamless or without problems. It appeared that the institutions have reached a stage of dynamic equilibrium. The problems that developed seem to have occurred because the introduction was very fast and some details had not been worked out in a timely manner.

CHAPTER V: SUMMARY AND POLICY IMPLICATIONS & RECOMMENDATIONS

Summary

EASTNET was funded for fiscal years 1995/96 and 1996/97 with the expectation that "the grants awarded by the Office of Educational Technology under the Educational Technology Initiative had been selected for their potential to demonstrate the uses of technology to improve access, quality, and/or cost effectiveness in teaching and learning, as well as the delivery of library or information resources in an electronic environment." (Office of Educational Technology Award Letter, 1996).

The collaborative doctoral program sponsored by the University at Albany at the College at Oswego had just completed its second year of courses in May 1998, which was its first year with no OET funding. The cohort grew from an enrollment in the first year of four, to an enrollment in 1998 of twelve. It originally was offered at Albany and at one remote site in Oswego. During spring '98, students participated at Albany and at two, sometimes three (including Potsdam or Plattsburgh, New York), remote sites at Oswego and Victor, New York.

As a pilot program it was successful, and as Dr. A. Dewey said, "...it survived that initial bashing of the pilot test. I'm very enthusiastic with, if the project continues, that at least the relationship between technology and instruction, at least the steps are known now, rather, than unknown. It will be easier, but there will still be a ton of folks who

won't be able to adapt. But for those who are enthusiastic and will, I think it's very easy to see what the future will be."

Other faculty members also are enthusiastic about the potential of distance education projects like EASTNET. Professor A. Fall said, "...this experience, distance learning, isn't up to the same level of quality or quantity of instructional material that we can deliver via the traditional method. But I think that very quickly it can be brought up to speed. I think the second or third time we do this will be very good."

Summarizing the events that led to May 1998, it is apparent that the EASTNET project was an opportunity that was presented to the two institutions by SUNY System Administration. The Educational Administration departments at Albany and Oswego had been discussing, for at least two years, a collaboration that would bring Albany's doctorate to central New York. The OET *Request for Proposal* released in August 1995 presented an opportunity that seemed almost too good to be true: it would allow the doctorate in Educational Administration & Policy Studies to be offered in Oswego without Albany's faculty driving that long distance.

Both administrations pursued the grant. Because of this inter-institutional collaboration, early decisions had to be made at the vice-presidential level. This often happens in higher education administration: an opportunity is presented and the top level administration has to make quick decisions in order to not lose the opportunity. The implementation, and decisions about details, are then left to faculty and lower level administrators.

Complicating things even more, was the fact that there were personnel changes at every level in these two institutions. Both presidents were "interim." They had previously been vice-presidents, but each institution was doing a national search for the top position. The dean's office at Albany was staffed by "interims" as well, and the chair of the Educational Administration & Policy Studies department at Albany changed twice over the summer of 1995, when OET released the original *Request for Proposal.*

Professor A. Panz said, "...we've all changed our positions. One of the difficulties, is that, we had so much fluidity that it was hard to know who was in charge of what. [There was a change in the] head of the Admissions Committee....and of the] chair of the department."

There was an extremely short turn-around time, especially when Albany and Oswego were asked to write a grant with Binghamton in order to be considered for funding. The final EASTNET grant was written over intercession and Martin Luther King weekend in 1996 and submitted via e-mail in order to meet OET's deadline.

Add to this the fact that funding was not received until the summer of 1996, classes were starting in September, and it's easy to see why faculty did not feel consulted in the EASTNET project. One of the major issues that developed concerned the promotional materials sent out by Oswego, which caused anxiety among faculty and administrators at Albany due to wording. This, too, was a result of communication problems that were occurring during this time frame. Literature on inter-institutional collaboration in distance education stresses that all important facets of an agreement must be finalized before any project begins (Moran & Mugridge, 1993). This was not done.

and in actuality, the agreement was not formalized by the two presidents until spring 1996, well into the implementation of EASTNET.

Classes began on schedule due to the perseverance, commitment, dedication, and professionalism of faculty and administrators at both Albany and Oswego. Technology issues arose immediately because of the late delivery of equipment, but gradually they were identified and solved, for the most part. Choices were made by the technical experts and finance and budget personnel, in consultation with SUNY System Administration, to purchase video equipment, that while not at the lowest end, was far from the "broadcast" quality that would be used on a major television station. It was decided that technology in the middle range would be adequate for distribution of courses from Albany to Oswego. Although it is true, that the equipment is adequate to distribute courses, a number of the faculty believed that the equipment must be upgraded in order to offer a quality educational program. The telephone lines in central New York remained a problem and breakdowns continued to occur, and although this was out of the control of SUNY, it was still a concern at the end of the study in May 1998.

Another major issue that evolved was that of Albany's residency requirement. Oswego requested revisions to the residency requirement which specifies that doctoral students must complete two full-time semesters, taking a minimum of 12 credits. Faculty in Albany's Educational Administration & Policy Studies department approved, as did the School of Education's Academic Council and the Graduate Council, an alternative residency requirement which met the "spirit" of the criteria which had been certified by the New York State Education Department. It allows Oswego students to complete the

residency over two consecutive summers, spending four weeks each in Albany and studying independently, in consultation with faculty over the entire summer. This compromise has worked, but not all concerned were totally enamored of it because they felt that students did not get the experience of being fully immersed in intense doctoral study and missed the opportunity to commune with the faculty on a regular basis.

Once the grant was submitted, faculty were involved in planning meetings and via e-mail. Approximately 70 percent of administrators and 50 percent of faculty who were involved with EASTNET had some experience in distance education, but none with compressed video technology. As with many new projects, faculty with a personal interest were the first to volunteer or "semi-volunteer" to teach the first courses. These faculty had some opportunity for training, but it was rushed and was considered adequate at best. Faculty members who taught via PictureTel in subsequent semesters reported that they had no real training, but rather, "briefings."

Faculty reported that compressed video, or PictureTel, can be used effectively for doctoral education, but it is not optimal. There were some reservations about the type of content that can be delivered, and the amount of interaction required by the nature of the content. Most faculty members teaching in the program communicated with students via e-mail, facsimile, postal mail, and telephone. At least one set up a "list serv" to facilitate communication between themselves and students, and among students. Some comments from faculty indicated that students had more time to think through answers to items from class or from the list serv and gave more reflective comments. It does appear that faculty would have been able to use some of the enhancements of the technology, such as

computer generated data and presentations, if they had received better training. Better training and attendance at distance education conferences would have encouraged their continued involvement. All agreed that the primary advantage of this distance education technology was access for adult students who could not travel to Albany during the school year to complete doctoral studies.

There was no discernable difference between administrators and faculty regarding their views on the benefits and costs of distance education. There were people from each category along almost the whole continuum of affinity or non-affinity for distance education. One thing that all agreed on is that there must be more research into the cost effectiveness of distance education. There are varying opinions, but there is no hard data on which to base a decision or do a cost-benefit analysis, and the benefits are often not economic.

There was a most definite difference in culture between the two institutions, Albany and Oswego. Albany had a large, diverse, loosely connected faculty, while Oswego had a small, closely-knit group of faculty. The geography of locale, and the size and missions of the two institutions added to the cultural differences. Another difference that had quite an impact on the implementation, was that organizationally Oswego has made a firm commitment to distance education, actually appointing an assistant provost for technology. Albany had not made this strong commitment to distance education and this had an impact on implementation.

While the pilot project of EASTNET was successful, the future of this distance education program at Albany was uncertain in May 1998. The OET funding had ended

and the initiative had to be self-funded. The departments did not have the funds in their operating budgets to offer incentives of any kind to faculty, and of course, the institution would have to cover the technology costs. Enrollment was very low at the beginning, and even in spring 1998, with 12 students, tuition may not have covered costs. It was unclear as to what enrollment would be sufficient to accept the next cohort. The faculty of Educational Administration & Policy Studies was in transition, and had experienced many retirements and vacancies. The number of faculty to be replaced was uncertain at the time of this writing. Faculty support is critical to the success of any distance education initiative and this must be improved with the existing faculty and thought of as a criterion when making hiring decisions.

Technology must be revisited. Although most of the faculty members interviewed felt that it was at least adequate, all felt that there were many glitches. At least one faculty member will not teach in the program again until the technology is improved. These concerns have to be carefully evaluated against resource limitations.

All said, EASTNET should be considered a success. A cohort of students who may never have been able to pursue the doctorate was almost finished with the course work for the degree. Each institution was able to upgrade its facilities to include distance education classrooms. Each department and faculty realized that they could operate in the distance environment and reach students whom they would previously have lost. Perhaps most importantly, each institution was using the EASTNET project as a "trampoline" to other distance education initiatives. Other academic departments saw the accomplishment of Educational Administration & Policy Studies at Albany and

Educational Administration at Oswego and was experimenting with distance education. At Oswego, additional programs were being offered to train superintendents of schools, and in vocational education. The Curriculum Development & Instructional Technology (ETAP) program at Albany started a distance education master's program in educational technology, and faculty members of Educational Administration & Policy Studies had even mentioned the possibility of using computer mediated, on-line education at the master's level.

Policy Implications and Recommendations

The success of the EASTNET project was due mainly to the commitment of those who were involved with it. The grant funds were not received until the end of the first year of the grant. Classes started within two weeks of the equipment being delivered. Technical specialists at all levels at Albany and Oswego pulled together to make sure classes could start on time. They did their professional best to work out "technological bugs" that accompanied the rushed start time and the incompatibility of the telephone systems upstate. They continued to work out any glitches that occurred. Technicians put in countless hours to facilitate the use of the new technology.

Many faculty members were equally committed. Due to the late delivery of the equipment, faculty did not have much time to experiment with it but they spent a lot of time educating themselves about this new modality. Of the two professors who taught during the first fall semester, one spent the summer redoing the course for the World

Wide Web, and the other spent it reading about distance education and its impact on teaching and learning.

Other administrators who were involved similarly demonstrated a high level of commitment to the project. A major part of the grant proposal was written over Martin Luther King weekend and the deans' offices reallocated graduate assistantships to assist faculty working on the EASTNET project.

Recommendation #1. Appoint an Associate Vice-President for Instructional Technology at the University at Albany.

For any initiative in higher education to be successful, it should be closely related to the core mission of the institution. Typically the mission of a university or college combines instruction, research and public service. Distance education is part of the instructional mission and can also be related to public service, depending upon the clientele being served by the instructional activity. It is unclear as to what priority distance education had for the University at Albany and how it fit with its institutional mission.

The Campus Computing Survey for 1996, a national research project focused on the use of information technology in higher education, reported that less than half of the nation's two- and four-year colleges and universities had strategic plans for the use of technology; only 28 percent had a financial plan for amortizing and replacing and supporting the technological infrastructure of the institution; and only 17 percent had a formal plan for the utilization of information technology and World Wide Web resources

in their distance education strategy. "Taken together, these data suggest an ad hoc strategy underlying much (perhaps most?) institutional planning in the realm of technology. For many campuses, great aspirations about the use of technology in instruction and scholarship play against institutional drift in the area of technology planning" (Green, 1997, p. J-7).

For EASTNET to be sustained and for the University at Albany to be successful in future distance education initiatives, it is important that there be a position responsible for providing leadership in the use of instructional technologies for the entire institution. This position must have enough status to effect change and must have direct access to those who decide about faculty rewards. Access must be available to sufficient resources to empower "institutional champions", research various modalities, purchase the best equipment (within resource constraints), and build for the future. The incumbent must have the capability to envision what technology can achieve for the University and develop a strategic plan to accomplish it. According to Green, (1997), "Institutional and program aspirations, mission, mandates and resources are key factors that will determine the success of efforts to integrate technology into classroom-based and distance/online education programs. Yet perhaps the difference between experiencing technology as a guiding light and technology as a quagmire will ultimately depend on an institutional and programmatic vision, a strategy and a plan" (p. J-3).

Distance education initiatives require research and knowledge in the areas of finance, academic quality, enrollment counting, library services, academic program

review and approval, advisement and support services, tuition, academic calendars, cross-registration, transcripts, articulation and transfer issues, copyright and fair use, marketing, intellectual property, and program evaluation and assessment. The position must have authority to influence policy in all of the preceding areas.

It is recommended that this position report to the president, the vice- president or the provost in order that the incumbent may have the position power to effect change and influence policy. EASTNET was successful as a pilot project, but it is apparent that faculty and administrators who have so many other responsibilities, with distance education being an "add on", that the full potential at the University at Albany will not be discovered or fulfilled without a position such as an associate vice-president. If created, the incumbent can lead initiatives, upon consultation with appropriate faculty, that will enhance the already excellent reputation of the various departments and the University as a whole, statewide, nationally and internationally, attract new students and increase access for undeserved populations.

Recommendation #2. Motivation to use Instructional Technology should be one criterion for new faculty recruitment and appointment.

If institutions such as the University at Albany and the College at Oswego decide that teaching students at a distance matches their missions and is an activity that should be continued or expanded, then consideration of this goal must be granted in the

recruitment process. New faculty should be sought who have experience in, or a predisposition to, teaching with instructional technologies.

Recommendation #3. Increase rewards and/or incentives to faculty.

Faculty are principally motivated by intrinsic rewards such as quality of interaction with students; working with motivated students; satisfaction from the art of teaching; the feeling of personal achievement; and a high level of student outcomes (Taylor & White, 1991, p.8). However, individual initiative and commitment will not be enough to sustain EASTNET or future distance education initiatives. "Distance education programs have flourished because of a cadre of intrinsically motivated faculty--- individuals whose motivation comes primarily from the personal satisfaction of providing greater access to education, serving non-traditional learners, or working with emerging technologies. As the demands of distance teaching increase, rewards for distance teaching looms as a significant issue" (Wolcott & Haderlie, 1996, p. 2).

Individual initiative and commitment will not be enough to sustain EASTNET or future distance education initiatives. Intrinsic rewards can be enough to get faculty involved in distance education, but extrinsic rewards must be forthcoming in order to sustain programs and increase participation. The University at Albany presently rewards faculty with the services of a graduate assistant to facilitate logistical arrangements for the remote students. When the University introduced distance education through EASTNET it offered release time to faculty who taught in the first year to the Oswego cohort. Faculty members taught one course instead of two each semester, thereby granting each

official recognition for the class that was being taught at a distance. This is no longer done. Nor are faculty offered stipends to convert traditional courses to formats best suited to compressed video instruction, although this can be a very time-consuming activity. Faculty must be tangibly rewarded for the work that they are doing in distance education. "The amount of work required, together with the time involved to adapt instruction for distance delivery and to learn new skills associated with the technology, posed significant barriers to participation when added to an already heavy workload" (Wolcott & Haderlie, p. 4).

Training in technology and pedagogy is also critical to the success of distance education initiatives. Most faculty receive great self-satisfaction from the high quality of their interactions with students, and the resultant high level of student outcomes. These quality outcomes can best be achieved in distance education environments through the professional development of faculty. Teaching through distance education modes can be different than face-to-face instruction because it often relies on the self-directed learning and empowerment of students, a collaborative mode of learning and on problem posing and solving. Curricula must be redesigned for collaborative learning and the teacher becomes a facilitator as opposed to a dispenser of information. These changes require the professional development of faculty which can be accomplished via their attendance at workshops, seminars and conferences dedicated to the dissemination of distance education knowledge.

Finally, and perhaps most importantly, consideration has to be given to distance education teaching in the promotion and tenure process if distance education initiatives

such as EASTNET are going to be sustained and enhanced. This will be especially true at Albany's Department of Educational Administration & Policy Studies which has recently experienced a number of vacancies, only some of which have been filled. New faculty members must meet the institution's requirements to be considered for tenure. If the institution does not place a value on distance education teaching, then faculty who spend time preparing courses for distance environments instead of in other activities that are held in more esteem by the institution, could be penalized in the promotion and tenure process.

Distance education initiatives depend for success on the inclusivity of stakeholders. One way to ensure this inclusivity is to ensure that all stakeholders share in the benefits. Rewarding tangibly and/or offering incentives to faculty allow them to share in the benefits of distance education.

Areas for Future Research

Distance education includes a myriad of activities, modalities, disciplines and facets. This study covered only one "case" and only one aspect of this case. Many other areas for continued research were illuminated over the two years of the study of EASTNET, including the following:

1. Student Evaluation of EASTNET

In an effort to focus the study to an achievable goal, the researcher made the decision not to solicit student input. There is "hearsay" from informants that students

were generally satisfied with EASTNET and very appreciative of the ability to complete a doctoral degree via distance education. However, it is recognized that the evaluation of any project by all stakeholders is vital. There is much evidence to suggest that student feedback, comments and evaluation are invaluable to the sustainability of distance education initiatives. It is suggested that additional research be conducted through seeking information from the students who participated in the initial cohort in the collaborative doctoral program. This study should not be limited to the remote students participating in Oswego and Victor but must also include the on-campus students who share the same instructor from Albany.

2. Cost Effectiveness of EASTNET or Compressed Video

The effectiveness of any distance education initiative must also include a cost-benefit analysis. The researcher focused this study on responses of administrators and faculty and did not delve into the financial arena. This area is one that is critical to the sustainability of a distance education project and is an area of interest for most administrators and faculty. There appears to be a lot of misinformation, or inaccurate or incomplete information regarding EASTNET. Most administrators and faculty do not have enough information to judge either the cost or the benefits of a project such as this. A thorough cost-benefit analysis, including hidden costs such as release time and overhead, should be undertaken to thoroughly understand the EASTNET initiative.

3. On-line Education at the Master's or Doctoral Level

This study was concerned only with the EASTNET initiative and specifically the collaborative doctoral program between the University at Albany and the College at Oswego. There have been phenomenal technological advances since the original proposal was written and the project was initiated in 1996. Compressed video, such as PictureTel, was one of the better choices then, but in 1998 asynchronous modes, such as computer-mediated education, are evolving that offer many benefits to students and faculty. There are many who believe that asynchronous distance education, such as courses offered through The SUNY Learning Network which was also funded through the Educational Technology Initiative, is the wave of the future. It has been suggested that asynchronous learning networks (ALNs) are far superior to synchronous forms of distance education because they offer flexibility of not just place, but also of time, and provide excellent means of interaction between faculty and students and among students. This modality should be investigated as another enhancement to traditional instruction at the graduate level and as a way to increase access and share university resources across New York State.

Conclusion

Distance Education is here to stay. Higher education can not deny its existence and its potential to be a "major player" in the future. The higher education marketplace is actually ***expanding and shifting*** at the same time. According to statistics from the U. S.

Department of Education, reported by Kenneth Green in the AAHE Bulletin, October, 1997, (as cited in Haile & Fredericksen, 1998):

1. In 1998, 5 out of every 11 college students will be age 25+.
2. In 1998 the number of students age 35+ will exceed those students age 18 and 19.
3. In the next 12 years [2009] the enrollments in two-year and four-year colleges could grow from 15 million to 20 million students.

Similar information is given by The New York Times on August 13, 1997. Referring to the current reversal in higher education enrollment, which had decreased during the past 15 years, The New York Times stated, "the demographic trend is about to reverse, with a 20% rise among that population in the next 15 years." William F. Massey of Stanford and Robert Zemsky of the University of Pennsylvania, predict that the demand for information technology-based education will increase **"exponentially"** and will profoundly affect higher education, no matter how institutions respond to or do not respond. They also predict, "...if traditional colleges and universities do not exploit the new technologies, other non-traditional providers of education will be quick to do so."

The well known Western Cooperative for Educational Telecommunications, which was sponsored by sixteen Western governors and two states (Oklahoma and Indiana) from outside the Western Governors' Association in May 1998, created a virtual university in 1996-1997. Utah Governor, Michael Leavit, described the emerging independent, non-profit corporation as important to the future of higher education: "this is

not a replacement for the existing system of higher education. It is a new element. It is a supplement. It is a way of creating new choices and opportunities for learning. But while this is not a replacement, it is an important part of a quality education because this is the way the world is going to work in the future"(Chronicle of Higher Education, XLIV, 1998, A23).

Current campus-based models will not be able to meet the needs of this expanding market and those students who are presently unwilling or unable to participate in it. Distance Education is one of the opportunities that can help higher education meet the needs of not only our state and national constituencies but those of international students as well.

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INTERVIEW QUESTIONS **APPENDIX A**

Questions for Decision Makers

1. Who initiated the idea of *Eastnet*?
2. Who was involved in developing the proposal?
3. What was the time line followed in the proposal development?
4. How were the departments chosen for participation in EASTNET?
5. What criteria were used in choosing the technology?
6. What criteria were involved in choosing partners in this collaboration?
7. What training was or will be offered to participating faculty and administrators?
8. How are the faculty involved with the ongoing evaluation of EASTNET?
9. What difficulties were faced to gain the support of the faculty and administrators for EASTNET?
10. What difficulties are currently being faced with EASTNET?
11. To what degree are funds included for adequate staffing, equipment, and technological support in the approved grant?
12. How will the project be funded after the grant period?.
13. What would ease EASTNET in being successful?

Questions for Proposal Authors

1. Who asked you to be an author of the proposal?
2. What section of the proposal did you write?
3. How did you research the information to be included in your section?

4. Whom did you work with in researching your section?

5. What types of compromises did you have to make in the drafting of the proposal?

6. How would you have changed the final proposal?

7. Based on the criteria of the decision makers, how adequately is the proposal funded?

8. What is your involvement in the first year of the grant?

9. What difficulties are currently being faced with EASTNET?

10. What is your involvement in the second year of the grant?

11. What will it take for EASTNET to succeed?

Questions for Faculty Implementors

1. How were you involved in the decision to apply for EASTNET funding?

2. How were you involved in technology decisions?

3. Who was involved in the decision to apply for the funding of EASTNET?

4. Who was involved in the technology decisions?

5. What is your experience with distance education?

6. What is your department's experience with distance education?

7. How supportive are the members of your department of EASTNET?

8. How supportive is the University administration of EASTNET?

9. What type of training have you received, or are you receiving, in the technology of EASTNET?

10. What type of training have you received, or are your receiving, in the pedagogy of distance education?

11. How adequate was this training?

12. If it were not adequate, how was it deficient?

13. How adequate is the funding of EASTNET to insuring success in the grant period?

14. What will make EASTNET be successful during the grant period?

15. What will make EASTNET be successful after the grant period?

16. What would improve EASTNET's chances for success?

17. Why are you involved in EASTNET?

Kathleen A. Kraus
80 South Ohioville Rd.
New Paltz, New York 12561
(914) 883-7722

APPENDIX B

February 1, 1997

Dear_____.

I am a Doctoral Candidate at the University at Albany/State University of New York and am asking you to take part in this study on distance education for my dissertation. My study focuses on how faculty and administrators respond to the introduction of distance education at their universities and colleges. I want to know how faculty and administrators may adjust to distance education as it is implemented over the first year.

If you choose to take part, I will ask you to answer questions based on your involvement with the EASTNET distance education initiative. I will ask you to give your opinions of the EASTNET initiative and to share your feelings about the project. Two or three interviews will be scheduled at times convenient for you over the next year, and I will request your permission to audio tape each interview.

Your response to all of the questions will remain confidential. I will not refer to you by any identifying factor in my notes or in my dissertation.

Taking part is voluntary. If you choose not to take part, there will be no penalty. If you take part, you may choose to stop at any time.

If you have questions about the study, please ask me or contact the chair of my dissertation committee, Dr. Douglas Windham, at the University at Albany/SUNY, phone number (518) 442-5082 or 5080.If you have questions about your rights as a volunteer, please contact Dr. Jeffery M. Cohen, Human Subjects Research Officer, University at Albany/SUNY. Please call him at (518) 442-3510 or visit him at the Office for Research, Administration Building 216 at the University at Albany/SUNY.

I will call you soon to arrange for a convenient time to meet, if you decide to take part in my study. If you have any information pertaining to EASTNET, such as memos, e-mail messages, reports, planning documents etc., I would like to ask if you would share photocopies with me, as this historical data will be very helpful as I trace the history of EASTNET. Thank you for all of your time and help. It is very much appreciated.

Sincerely,